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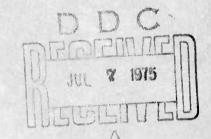


STORES INTERFACE DATA HANDLING ANALYSIS - PHASE II VOLUME II. APPENDIXES

HIGH-SHEAR CORPORATION

TECHNICAL REPORT AFATL-TR-75-3, VOLUME II

JANUARY 1975



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AIR FORCE ARMAMENT LABORATORY

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EGLIN AIR FORCE BASE, FLORIDA



Stores Interface Data Handling Analysis - Phase II Volume II. Appendixes

Michael J. Lauro Georgo T. Collins

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FOREWORD

This report was prepared by the Ordance Division, Hi-Shear Corporation, 2000 Skypark Drive, Torrance, California 90509, under Contract No. F08635-73-C-0094, with the Air Force Armament Laboratory, Eglin Air Force Base, Florida. Captain James F. Stuart, Jr. (DLJA) managed the program for the Armament Laboratory. The inclusive dates of this research were January 1974 to November 1974.

This report consists of two volumes. Volume I - Technical Discussion and Volume II - Appendices.

Contractor personnel who most actively participated in the preparation of this report were Messrs. Michael J. Lauro and George T. Collins.

This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER

FENDRICK J. SMITH, Chief, Munitions Diffision

ABSTRACT

This technical report describes those improvements made to the Store Interface Data Handling Analysis - Phase I for automating Aircraft/Store Electrical Interface Compatibility Analyses and computerized testing procedures. Until now, a manual method was used to compare hardcopy aircraft stores management system design data against store interface data generated by the Phase I Data Processing System. The improved system eliminates this time consuming task by automatically performing the complete interface compatibility analysis/test. A set of universal aircraft data documentation formats and new computer programs were developed for this added system capability. The new computer programs were designed to disclose any electrical incompatibility that may exist between the aircraft and store selected for comparison. New computer printouts provide detail pin to pin and general interface compatibility information. Diagnostic message printouts are also provided to define each specific incompatibility condition that was detected. The improved system may be used to evaluate or verify the adequacy of an aircraft to control its existing store complement. Essentially, the improved system would compare the electrical design limits of the aircraft stores management system against store electrical requirements that are contained in the AFATL Store Data File. Any incompatible or marginal interface condition will be detected. The system improvements described in this report will greatly reduce the time and cost associated with analyzing aircraft and stores from an electrical interface compatibility standpoint.

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APPENDIX I

LIST OF INCOMPATIBLE INTERFACE CIRCUIT DIAGNOSTIC MESSAGES

DIAGNOSTIC FILE CODE NO.	MESSAGE
JM-001	(A200A-E166) - No circuit exists in aircraft to mate with active test case store interface connection.
DM-002	None - Interface pin connection not used by test case store.
DM-003	None - Interface pin connection not used by aircraft or test case store.
DM-OOli	(A205-E156) - Aircraft circuit is not contained within a required multi-conductor cable.
DM-005	(A205-E156) - Aircraft circuit is contained within a non related multi-conductor cable.
1.M-006	(A206-E112) - Aircraft wire type is not suitable for test case store.
DM-007	(El25) - No Data
DM-008	(A207) - No Data
DM-009	(A206-E112) - Aircraft cable type is not compatible with specific store cable part number requirements.
มฬ-010	(A213-E157) - Aircraft circuit cannot accommodate store floating shield connection.
DM-011	(A213-E157) - Store circuit is not compatible with aircraft floating shield connection.
DM-012	(A214-E158) - Aircraft circuit is not used for a required structure ground connection.
DM-013	(A214-E158) - Store circuit is not compatible with aircraft structure ground connection.
DM-014	(A215-E165) - Aircraft circuit wire size is larger than acceptable store mating size limit. Store circuit may not be protected by aircraft circuit breaker.
DM-015	(A215-E165) - Aircraft circuit wire size is smaller than acceptable store mating size limit. Aircraft circuit is not capable of carrying sufficient circuit current.

DM-016	(A202-Elll) - Aircraft/Store circuit signal category assignments are not compatible.
DM-017	(A301-E151) - Aircraft has no interface with an essential store loop connection.
DM-018	(A301-E151) - Aircraft circuitry is not compatible with store loop connection.
DM-019	(A306A-E161) - Store loop circuit is not protected by the unswitched aircraft output circuits power source circuit breaker.
DW-050	(A307-E161) - Store loop circuit cannot carry maximum current that may be switched by the aircraft's output circuit.
DM-021	(All5-El61) - Normal aircraft circuit load exceeds current carrying/switching limits of the store loop circuit.
DM-022	(A307-E161A) - Aircraft output circuit switching device is not capable of switching store loop circuit series load(s).
DM-023	(A202-E162) - Aircraft sensor circuit is not compatible with test case store.
DM-024	(A301-E152) - Aircraft circuit voltage polarity is not compatible with the test case store.
DM-025	(A301-E152) - Aircraft circuit does not incorporate a circuit load which is required for normal test case store operation.
DM-026	(A301-E152) - Aircraft circuit does not incorporate a circuit control switch which is required for normal test case store operation.
DM-027	(A301-E152) - Aircraft circuit does not incorporate a series current limiting resistor which is required for normal test case store operation.
DM-028	(A301-E152) - Aircraft circuit contains a series current limit resistor that is not required and may affect normal test case store operation.
DM-029	(A301-E153) - Aircraft circuit does not incorporate an off-state parallel load to ground which is required by the test case store.

DM-030	(A302-E153) - Aircraft circuit does not incorporate an off-state ground connection which is required by the test case store.
DM-031	(A302-E153) - Aircraft circuit does not incorporate an off-state open circuit which is required by the test case store.
ым - 032	(A304-E114) - Aircraft circuit voltage type is not compatible with the AC voltage requirement of the test case store.
DM-033	(A304-E114) - Aircraft circuit voltage type is not compatible with the DC voltage requirement of the test case store.
DM-034	(A304-E114) - Aircraft circuit voltage type is not compatible with the special type voltage requirement of the test case store.
DM-035	(A303-Ell3) - Aircraft circuit minimum voltage value is greater than that required by the test case store.
DM-036	(A303-E113) - Aircraft circuit maximum voltage value is less than that required by the test case store.
DM-037	(A305-E154) - Aircraft circuit cannot meet minimum interface voltage value required by the test case store.
·1-038	(A303-E115) - Aircraft circuit maximum source voltage value exceeds maximum interface voltage allowable for normal test case store operation.
DM-039	(A307-Ell5) - Aircraft output circuit is not capable of controlling maximum store circuit steady state loads.
DM-040	(A308,A309-E118,E119) - Aircraft output circuit is not capable of controlling maximum store circuit transient loads.
DM-041	(A401) - Missing data
DM-042	(A401-E251) - Aircraft pylon jettison logic is not compatible with test case equipment installation.
M-043	(A402) - Missing data

DM-044	(A402-E252) - Aircraft bomb rack release logic is not compatible with test case bomb rack release circuit function.
DM-045	(A403-E253) - Aircraft launcher release logic is not compatible with test case launcher circuit release function.
DM-046	(A404-E254) - Aircraft store interface release logic is not compatible with test case store circuit release function.
DM-047	(A421-E260) - The aircraft monitor circuit is not suitable to display the available optional store operational status message.
DM-048	(A421-E260) - The aircraft monitor circuit is not suitable to display the required store operational status message.
DM-049	(A408-E255) - The aircraft monitor circuit logic is not suitable to display or control the available optional store monitor circuit.
DM-050	(A408-E255) - The aircraft monitor circuit logic is not suitable to display or control the required store monitor circuit.
DM-051	(A411-E217) - The aircraft operational status display nomenclature does not agree with the display message word requirements of the test case equipment.
DM-052	(413-E221) - Aircraft has no means to control the required test case equipment control circuit from the aircraft crew station.
DM-053	(A415-E257) - Aircraft circuit power signal I/O or shield connection is not compatible with test case equipment circuit.
DM-054	(A416-E259)- Aircraft sensor circuit is not compatible with test case store.
DM~055	(A417-E208) - Aircraft interface connection is not electrically isolated between weapon stations. Condition may result in abnormal store operation.
DM-056	(A418-E222) - Aircraft circuit is being used to control a unique store circuit that is dedicated for another purpose which violates safety or administrative design requirements.

DM-057	(A418-E222) - This interface connection employs the use of unique interface circuits. Check that no safety or administrative design requirements are being violated.
DM-058	(A419-E201) - Aircraft circuit does not meet station selection logic requirements of test case equipment circuit.
DM-059	(A501-E501) - The functional aircraft I/O circuit is not compatible with the non-functional test case equipment pin connection.
4-060	(A501-E501) - Aircraft circuit is not compatible with test case equipment input circuit type requirements.
DM-061	(A501-E501) - Aircraft circuit is not compatible with test case equipment output circuit type requirements.
DM-062	(A502) - Missing data.
DM-063	(A502-E502) - Aircraft output circuit switching form is not compatible with the input signal switching requirements of the test case equipment.
DM-064	(E503) - Missing data.
DM-065	(A503-E503) - Test case equipment output circuit switching form is not compatible with the input signal switching requirements of the aircraft circuit.
nm-066	(A506-E506) - The worst case (fixed) aircraft output circuit initiate delay time is less than the minimum circuit initiate delay time requirements of the test case equipment.
DM-067	(A507-E507) - The worst case (fixed) aircraft output circuit initiate delay time is greater than the maximum circuit initiate delay time requirements of the test case equipment.
DM-068	(A506,A505-E506) - The aircraft output circuit variable time setting device is not capable of being adjusted to meet the minimum circuit initiate delay time requirements of the test case equipment.
м-069	(A507,A505-E507) - The aircraft output circuit variable time setting device is not capable of

being adjusted to meet the maximum circuit initiate delay time requirements of the test case equipment.

(A511-E511) - Aircraft output circuit is not capable of providing a continuous output signal which is required for normal test case equipment operation.

(A509-E509) - The worst case (fixed) aircraft output circuit on-time is less than the minimum circuit on-time requirements of the test case equipment.

(A510-E510) - The worst case (fixed) aircraft output circuit on-time is greater than the maximum circuit on-time requirements of the test case equipment.

(A509,A508-E509) - The aircraft output circuit variable on-time setting device is not capable of being adjusted to meet the minimum on-time requirements of the test case equipment.

(A510,A508-E510) - The aircraft output circuit variable on-time setting device is not capable of being adjusted to meet the maximum on-time requirements of the test case equipment.

(A513-E513) - The worst case (fixed) aircraft output circuit drop-out delay time is less than the minimum circuit drop-out delay time requirements of the test case equipment.

(A514-E514) - The worst case (fixed) aircraft output circuit drop-out delay time is greater than the maximum circuit drop-out delay time requirements of the test case equipment.

(A513,A512-E513) - The aircraft output circuit variable time setting device is not capable of being adjusted to meet the minimum circuit drop-out delay time requirements of the test case equipment.

(A514,A512-E514) - The aircraft output circuit variable time setting device is not capable of being adjusted to meet the maximum circuit drop-out delay time requirements of the test case equipment.

DM-070

DM-071

DM-072

DM-073

DM-074

DM-075

DM-076

DM-077

DM-078

DM-079

080-M

D14-C81

M-082

DM-083

DM-084

DM-085

DM-086

DM-087

(A516-E516) - The worst case (fixed) aircraft output circuit off (dwell) time between power pulses is less than the minimum circuit pulse off-time requirements of the test case equipment.

(A517-E517) - The worst case (fixed) aircraft output circuit off (dwell) time between power pulses is greater than the maximum circuit pulse off-time requirements of the test case equipment.

(A516,A515-E516) - The aircraft output circuit variable off-time setting device is not capable of being adjusted to meet the minimum circuit pulse off-time requirements of the test case equipment.

(A517,A515-E517) - The aircraft output circuit variable off-time setting device is not capable of being adjusted to meet the maximum circuit pulse off-time requirements of the test case equipment.

(A506-E506) - The worst case (fixed) store output circuit initiate delay time is less than the minimum circuit initiate time requirements of the aircraft input circuit.

(A507-E507) - The worst case (fixed) store output circuit initiate delay time is greater than the maximum circuit initiate time requirements of the aircraft input circuit.

(A506-E507,E505) - The store output circuit variable time setting device is not capable of being adjusted to meet the minimum circuit initiate delay time requirements of the aircraft input circuit.

(A507-E507,E505) - The store output circuit variable time setting device is not capable of being adjusted to meet the maximum circuit initiate delay time requirements of the aircraft input circuit.

(A511-E511) - Store output circuit is not capable of providing a continuous output signal which is required for normal aircraft input circuit operation.

DM-088 (A509-E509) - The worst case (fixed) store output circuit on-time is less than the minimum circuit on-time required for normal aircraft input circuit operation. DM-089 (A510-E510) - The worst case (fixed) store output circuit on-time is greater than the maximum circuit on-time required for normal aircraft input circuit operation. DM-090 (A509-E509,E508) - The store output circuit variable on-time setting device is not capable of being adjusted to meet the minimum on-time requirements of the aircraft input circuit. DM-091 (A510-E510,E508) - The store output circuit variable on-time setting device is not capable of being adjusted to meet the maximum on-time requirements of the aircraft input circuit. DM-092 (A513-E513) - The worst case (fixed) store output circuit drop-out delay time is less than the minimum circuit drop-out delay time required for normal aircraft input circuit operation. DM-093 (A514-E514) - The worst case (fixed) store output circuit drop-out delay time is greater than the maximum circuit drop-out delay time required for normal aircraft input circuit operation. DM-094 (A513-E513,E512) - The store output circuit variable time setting device is not capable of being adjusted to meet the minimum circuit drop-out delay time required for normal aircraft input circuit operation. DM-095 (A514-E514,E512) - The store output circuit variable time setting device is not capable of being adjusted to meet the maximum circuit drop-out delay time required for normal aircraft input circuit operation. DM-096 (A516-E516) - The worst case (fixed) store output circuit off (dwell) time between power pulses is less than the minimum circuit pulse off-time required for normal aircraft input circuit operation. DM-097 (A517-E517) - The worst case (fixed) store output circuit off (dwell) time between power pulses is greater than the maximum circuit pulse off-

operation.

time required for normal aircraft input circuit

(A516-E516,E515) - The store output circuit DM-098 variable off-time setting device is not capable of being adjusted to meet the minimum circuit pulse off-time required for normal aircraft input circuit operation. (A517-E517,E515) - The store output circuit DM-099 variable off-time setting device is not capable of being adjusted to meet the maximum circuit pulse off-time required for normal aircraft input circuit operation. (A601-E601) - Aircraft circuit ground/shield DM-100 connection is not compatible with the signal function interface requirements of the test case store. (A601-E601) - Aircraft connection is not com-DM-101 patible with the test case store power return (ground) circuit requirements. (A601-E601) - Aircraft connection is not com-M-102 patible with the test case store circuit shield connection requirements. (A601A) - Missing data. DM-103 (A601A-E601A) - Aircraft circuit is not com-DM-104 patible with store switching sequence order requirements. (A602-E602) - The test case store circuit on-DM-105 state (true) requirements are not compatible with N related aircraft circuits. (A602-E602) - The test case store circuit off-M-106 state (false) requirements are not compatible with N related aircraft circuits.

APPENDIX II

AIRCRAFT CHARACTERISTIC DEFINITION SHEETS

1. ATTACHMENTS

The attached sheets provide format information and data documentation rationale for the universal aircraft data documentation formats shown in Figures 8 through 13.

ARACTERISTIC		AFT STATIO	ON NUMBER	A100
FINITION	Designates data card c	the aircra	aft station assoc characteristics.	iated with the
	BLOCK LETTER:	A	SIGNAL CATEGORY:	N/A
DLUMN(S) 1-2	STYLE DI-1	FORMAT I2	choice/vA Aircraft	LUE Station Number
weapon st	ts from 1 to 0 tation. Do no reference.	O may be ut use let	used to identify ters such as "LO"	the applicable or "RI" as a

CLIA	DA	Citta.	ייסדסי	TTC	TITI	14
LILES	. 13.11	Contraction of the last of the	(4 1 7)	1 11/	1 4 4 1	-54.4

CONNECTOR IDENTIFICATION CODE NO.

). Δ1

Alol

DEFINITION

Designates the equipment group applicability of the aircraft interface connector in coded form.

CHARACTERISTIC BLOCK LETTER:

Λ

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

4-6

DI-1

13

Connector Identification
Code Number

REMARKS:

The aircraft data file should facilitate a set of three digit code numbers (100 to 999) for each complement of interface connectors that are provided at the weapon station. Each code number will represent the aircraft interface connector normally used to control a specified group of stores and/or suspension devices. A different code number should be used if the aircraft interface (for any given equipment) is comprised of more than one connector.

Those codes assigned to one station may be used (repeated) to identfy the same equipment groups at other aircraft weapon stations.

HARACTERISTIC	CONNE	ECTOR PART	NUMBER	Alo2	
EFINITION					
Actual nart	number of air	rcraft int	terface connector.		
Accuar paro	number of ar				
CHARACTERISTIC	BLOCK LETTER:	A	SIGNAL CATEGORY:	N/A	
CARD DATA:					
COLUMN(S)	STYLE	FORMA!	r CHOICE/VA	LUE	
7-24	AN-1	4A4,A		r part number	
DEMARKS.					
REMARKS:					
	otion of alph	a numeric	characters may b	e documented in	1
Any combin	ation of alph	a numeric	characters may b	e documented in	ı
	ation of alph columns.	a numeric	characters may b	e documented in	1
Any combin	ation of alph columns.	a numeric	characters may b	e documented in	1
Any combin	ation of alph columns.	a numeric	characters may b	e documented in	n
Any combin	- ation of alph columns.	a numeric	characters may b	e documented in	ı
Any combin	ation of alph columns.	a numeric	characters may b	e documented in	1
Any combin	ation of alph columns.	a numeric	characters may b	e documented in	1
Any combin	dion of alph	a numeric	characters may b	e documented in	n
Any combin	ation of alph columns.	a numeric	characters may b	e documented in	n
Any combin	ation of alph	a numeric	characters may b	e documented in	1

CHARACTERISTIC TITLE: NO. CONNECTOR MARKER NUMBER A103 DEFINITION Designates the aircraft interface connector "J" or "P" marker number reference as specified in the relevant aircraft technical order manual. N/A SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE 2A4 26-33 AN-2 Connector marker number

REMARKS:

Any combination of alphanumeric characters may be documented in these card columns.

CHARACTERISTIC TITLE:

NO.

CONNECTOR INSERT COMPATIBILITY CODE NUMBER

ALC4

DEFINITION

Alphanumeric code number used to describe the aircraft interface connector in terms that will facilitate computerized aircraft/ store connector mating compatibility testing.

CHARACTERISTI	C BLOCK LETTER:	A	SIGNAL CATEGORY: N/A	
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALUE	
35	AN-1	Al	Connector Type Code Letter	
36 - 37	DI-1	12	Insert Configuration Code No.	
38	DI-1	11	Keyway Position Code No.	

REMARKS:

Card column 35 is provided to accept a code letter (A to Z). Each letter will represent a specific connector type. For example, the letter "A" may indicate connector type (MS) per MIL-C-5015, the letter "C" may indicate connector type (CE) per MIL-C-26482, etc.

Card columns 36-37 are provided to accept a two digit (O1-99) code number. Each code number will represent a unique connector insert configuration for the type connector specified in column 35.

CHARACTERISTIC TITLE:

CONNECTOR INSERT COMPATIBILITY CODE NUMBER

A104

NO.

REMARKS

Card column 38 is provided to accept a single digit (0 - 9) code number. Each number represents a different pin or socket keyway position of the connector insert.

Letter Position Keyway Code Conversion:

0 = S 2 = SW 4 = SX 6 = SY 8 = SZ 1 = P 3 = PW 5 = PX 7 = PY 9 = PZ

Number Position Keyway Code Conversion:

0 = SN 2 = S2 4 = S3 6 = S4 8 = S51 = PN 3 = P2 5 = P3 7 = P4 9 = P5

This characteristic is used by the Phase 2 computer programs to determine the physical mating ability of aircraft and store connectors. The connector type and insert configuration codes of the aircraft and store must be same to indicate a physical mating compatibility. In addition, the keyway position code number assigned to the aircraft and store connector must be as follows:

If the aircraft connector keyway is coded with a 0, 2, 4, 6, or 8, the store must be coded with a 1, 3, 5, 7, or 9 respectively.

Conversely, if the aircraft connector is coded a 1, 3, 5, 7, or 9, the store must be coded with a 0, 2, 4, 6, or 8 respectively.

A listing of code number assignments for connector types and insert configurations have been prepared and are available at the Air Force Armament Laboratory (DLJA).

CHARACTERISTIC TITLE: CONNECTOR INTERFACE FUNCTION DEFINITION Defines the utilization of the aircraft interface connector

CHARACTERIST	IC BLOCK LETTER:	Α	SIGNAL CATEGORY: N/A
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
39	SSM-1	3A1	Store
40			Suspension device
41			Fixed Station Equip.

REMARKS:

The store function designates that the aircraft interface connector is used to mate with a store or its adapter cable.

The suspension device function designates that the aircraft interface connector is used to mate with a suspension device.

The fixed station equipment function designates that the aircraft interface connector is used to mate with an electrical device/equipment that is permanently installed at the aircraft weapon station.

CHARA	CTERTSTIC	TITE.

NO.

CONNECTOR PIN UTILIZATION - ACTIVE CIRCUITS

A106

DEFINITION

Designates the number of pins used by the aircraft interface connector for normal aircraft/store interface circuit operation.

CHARACTERISTIC BLOCK LETTER: A

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

43-45

DI-1

13

Active circuits

REMARKS:

Connector pins that contain spare wires (capped and stowed) should not be considered as active circuits.

CONTROL T	TITLE:	ד ואודיכו וא	SOLATION CIRCUITS	NO.
CONNECTOR P	IN UTILIZATIO	M - LTM 1	DOLATION CIRCUITS	
DI				
Designates nector to p interface o	rovide a phys	pins use ical barr	ed by the aircraft rier between criti	interface con- cal connector
HARACTERISTIC	BLOCK LETTER:	A	SIGNAL CATEGORY:	N/A
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VA	LUE
46 - 48	DI-2	13	Pin Iso	Lation Circuits
REMARKS:				
	solation pins	are norm	ally specified on	relevant technica
Circuit is	solation pins	are norm	ally specified on	relevant technica
Circuit is	solation pins	are norm	ally specified on	relevant technica
Circuit is	solation pins	are norm	ally specified on	relevant technica
Circuit is	solation pins	are norm	ally specified on	relevant technica
Circuit is	solation pins	are norm	ally specified on	relevant technica

HARACTERISTIC T	TITLE:			NO.
CONNECTOR PILEFINITION	N UTILIZATION	- USABLE	SPARE CIRCUITS	A108
Designates	the number o for interface	f pins av growth/n	vailable on the aircraft modification purposes.	inte rf ace
HARACTERISTIC	BLOCK LETTER:	A	SIGNAL CATEGORY: N/A	
ARD DATA:				
olumn(s)	STYLE	FORMAT	CHOICE/VALUE	
49-51	DI-1	13	Usable Spare C	ircuits
REMARKS:				
				SHEET 1 OF

CHARACTERISTIC TITLE:

EQUIPMENT INTERFACE GROUP NO.

Alog

DEFINITION

Designates the station and applicable equipments that are controlled by the aircraft interface connector in coded form.

CHARACTERISTIC	BLOCK LETTER:	A	SIGNAL CATEGORY: N/A
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
53 - 54	DI-1	12	Station Reference
56 - 58	DI-1	13	Store Group
60 - 61	DI-1	15	Suspension Device Group

REMARKS:

The rationale used for assigning code numbers to this characteristic is described in SECTION IV, paragraph b.

	TITLE:	INUATION CO	I I IMNI	NO.
DEFINITION	JOH	INOMITON CO.	DOM	(NONE)
the next da	ita cara con	tains addit:	(when checked) to indictional - connector infoirment group interface	ammati am
CHARACTERISTIC	BLOCK LETTER:	A	SIGNAL CATEGORY: N/A	
CARD DATA:			N/A	
COLUMN(S) 72	STYLE SEX	FORMAT Al	CHOICE/VALUE Continuation	
EMARKS:				

CHARACTERISTIC TITLE:

CARD NUMBER

NO.
Allo

DEFINITION

Provided a means to identify data cards for deck set-up purposes.

SIGNAL CATEGORY: N/ACHARACTERISTIC BLOCK LETTER: A CARD DATA: CHOICE/VALUE STYLE FORMAT COLUMN(S) Characteristics Block Letter A SEA-1 Al 73 Station Reference 74 - 75 12 DI-1 77 - 79 Data Card DI-1 13 80 SEA-2 Al Continuation Card Letter

REMARKS:

The rationale used for the assignment of card numbers is as follows:

Column 73 - the characteristic block letter represents the applicable aircraft data documentation format.

Code Letter	Aircraft Data Documentation Format
A	Station Interface Connectors
В	Station Interface Wiring
C	Interface Signal Form
D	Interface Signal Logic
E	Interface Switching Form/Time
F	Interface Signal Sequence

	NO.
CARD NUMBER	Allo
CARD NORDER	

REMARKS

Columns 74 - 75 - These columns are used to designate the applicable aircraft station number in coded form (refer to aircraft characteristic AlOO).

Columns 77 - 79 - These columns are used to designate a unique three digit number (from 001 to 999) for each data card associated with the respective characteristic data block.

Column 80 - This column is provided for aircraft data file growth purposes. Should new aircraft data characteristics be added to the data file in the form of an additional card, the supplement cards will then be identified by including a revision letter in column 80.

A

SHEET 2 OF 2

CILIA	DA	(Auth)	PTCT	TIT	TITL	1.1 •
LIA	111/14	1 1 1	TILLIL	11/	1 1 1 30	. L.

SIGNAL SEQUENCE GROUP CODE NO.

NO.

A111

DEFINITION

Designates the interface signal sequence configuration of all circuits associated with the aircraft interface connector in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

63 - 66

DI-2

14

Signal Sequence Group Code No.

REMARKS:

This characteristic is non-functional and was provided on the data documentation format for file growth purposes only.

CHARACTERISTIC TITLE:

AIRCRAFT CIRCUIT FUNCTION NO. (Station Interface Wiring Format) NO.

A200

DEFINITION

Defines the aircraft circuit associated with each interface connector pin in coded form.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

A11

CARD DATA:

r			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
1 - 2	DI-1	12	Station Reference
4 - 6	DI-1	13	Circuit
7	SEA-2	Al	Branch
8	SEA-2	Al	Ground

REMARKS:

The rationale used for the assignment of aircraft circuit functions is as follows:

> Columns 1 - 2 - These columns are used to designate the station number associated with the aircraft interface function.

Columns 4 - 6 - These columns are used to designate a unique code number (1 to 999) for each different aircraft circuit that is provided at the aircraft/store station interface. In certain cases, an aircraft circuit that is terminated at a pin on the aircraft interface connector is switched in the aircraft to one or more different power sources (or aircraft loads).

CHARACTERISTIC TITLE:

AIRCRAFT CIRCUIT FUNCTION NO.

NO. A200

REMARKS

Such circuits are defined in this report as "Multi-function circuits". These type circuits are documented in a manner where each function of the circuit can be defined according to its peculiar electrical characteristics. Therefore, if a multi-function circuit is terminated at a connector pin, two complete data card entries are made, with each function referencing the same interface connector pin. Documenting the electrical characteristics of each function of the interface circuit is essential for a complete and valid comparison of aircraft and store interface circuit characteristics.

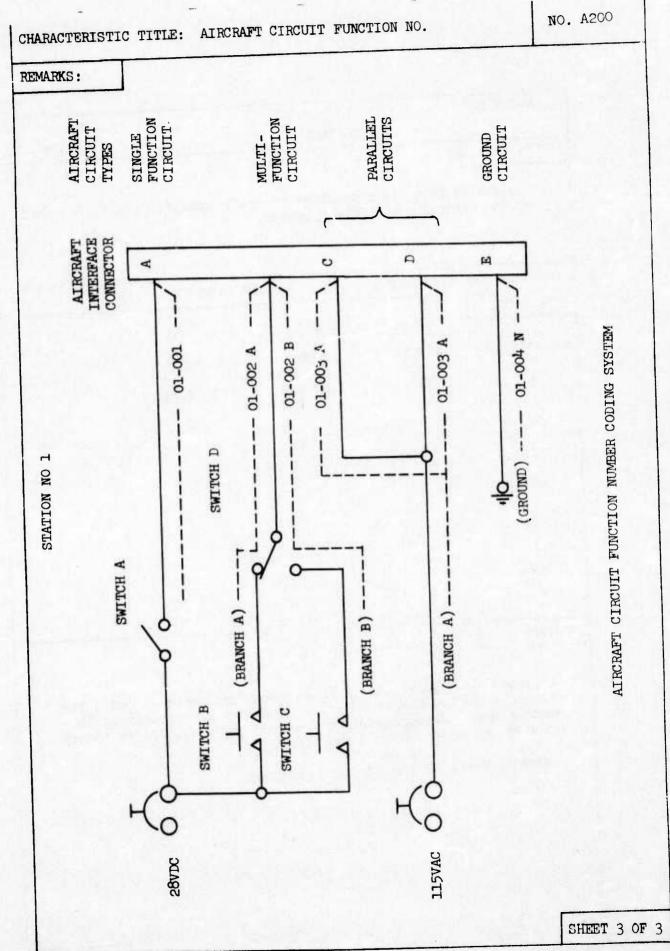
Aircraft interface circuits that are connected in parallel in the aircraft are documented on individual data cards. This feature enables a complete pin to pin examination of aircraft and store interface circuits.

Single function circuits such as individual power switching and ground circuits are documented on individual data cards.

Columns 7 and 8 - These card columns are used to designate the individual branches of multifunction function, parallel, and ground connection aircraft interface circuits. The illustration shown in sheet 3 of 3 depicts a typical example of the aircraft circuit functions number coding system used in this report.

Column 8 is used exclusively for documenting aircraft ground connections. The letter "N" is written in this column to indicate that the aircraft end of the interface circuit is terminated at a grounding terminal strip or directly to aircraft structure.

SHEET 2 OF 3



CHARACTERISTIC TITLE:

NO CIRCUIT

NO.
A200A

DEFINITION

Designates that the respective aircraft connector pin is not used by the aircraft's electrical system.

CHARACTERISTIC BLOCK LETTER: B SIGNAL CATEGORY: N/A

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

9 SEX Al No Circuit

REMARKS:

In those cases where the aircraft connector has no circuit, the nomenclature "No Circuit" may be documented in characteristic number A201. Consequently, the connector pin will be so identified on printed computer output data.

Characteristic A200 should be left blank.

CHARACTERISTIC TITLE: NO. AIRCRAFT CIRCUIT FUNCTION NOMENCLATURE A201 DEFINITION Provided a brief wording description of the respective aircraft circuit function. CHARACTERISTIC BLOCK LETTER: SIGNAL CATEGORY: В All CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 10 - 24 AN-1 3A4,A3 Aircraft Circuit Function Nomenclature REMARKS: Any combination of alphanumeric characters may be documented in these card columns.

CHARACTERISTIC TITLE:

SIGNAL CATEGORY

NO.
A202

DEFINITION

Designates the functional usage of the respective aircraft interface circuit.

SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Release 5A1 SSM-1 25 Monitor 26 Control 27 Sensor 28 Power 29

REMARKS:

The following rationale is used for the assignment of signal categories to aircraft interface circuits.

Column 25 - Release circuits are all circuit types that are employed for the direct actuation of equipment ejection, firing, dispensing, launching, and jettison mechanisms.

SIGNAL CATEGORY

NO. A202

REMARKS

Column 26 - Monitor circuits are all circuits that are employed for indicating equipment status. These include such sensing functions as store status messages, store present, store identification, store quantity, and other similar information.

Column 27 - Control circuits are all circuits that are employed to precondition (by pilot operations or automated means) equipment for management and/or release. These include such control functions as arming, safing, station selection, heater control, etc.

Column 28 - Sensor circuits are all digital and analog circuits that are employed for the exchange of guidance, target acquisition, tracking, and other similar functions between the aircraft's avionic equipment and weapons. Video and audio signal are also considered to be sensor circuits.

Column 29 - Power circuits are all circuits that are dedicated for store power functions. These include high current consumption circuits used by equipment motors, heater, power supplies, etc. All power return (ground) circuits and cable shield circuits should also be classified in the power signal category.

SHEET 2 OF 2

ARACTERISTIC T	TITLE: ECTOR IDENTIF	CODE	NO. A203
Designates	the aircraft ircuit funct:	connector as	sociated with the respective
HARACTERISTIC	BLOCK LETTER:	B	GNAL CATEGORY: All
ARD DATA:	STYLE	FORMAT	CHOICE/VALUE
31 - 33	DI-1	13	Connector Identification Code Number
REMARKS:			
Refer to identific	characterist eation coding	ic AlOl for a procedures.	a detailed explanation of connec

NO.

AIRCRAFT/EQUIPMENT INTERFACE CONNECTION

A204

DEFINITION

Designates the pin number or letter associated with the aircraft/ store interface connection.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
34 - 35	AN or DI-1	A2	Letter/Number
36	SEX	Al	Lower Case
37	SEA-1	Al	Pin Size Code
38 - 40	AN or DI-1	A3	Terminal Number

REMARKS:

Placing a check mark (x) in column 36 indicates that the pin letter specified in columns 34-35 are lower case letters.

The same pin size coding procedure described in AFATL-TR-73-214, Phase 1, Page 122, is applicable to this aircraft characteristic.

MULTI-CONDUCTOR CABLE

NO.

A205

DEFINITION

Designates that the aircraft circuit is one conductor of a multiconductor cable that is terminated at the aircraft interface connector.

CHARACTERISTIC BLOCK LETTER:

В

SIGNAL CATEGORY:

A11

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

1+7

SEA-1

Al

Multi-Conductor Cable

REMARKS:

All conductors within the same multi-conductor cable must be identified by placing a letter (A to Z) in card column 41.

Each different multi-conductor cable (terminated at the same aircraft interface connector) should be coded with a different letter.

WIRE TYPE

NO. A206

DEFINITION

Designates the type of wire or cable connected to the aircraft side of the aircraft interface connector.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

42

SSM-1

3Al

Standard Shielded

43

44

Coaxial (Other)

REMARKS:

The same wire type coding procedures and part number correlation described in AFATL-TR-73-214, Phase 1, Page 122, are applicable to this aircraft characteristic.

NO. CHARACTERISTIC TITLE: A207 WIRE TYPE CODE DEFINITION Designates the part number (in coded form) of the wire or cable connected to the aircraft side of the aircraft interface connector. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Wire Type Code Al SEA-1 45 REMARKS: The same wire type coding procedures and part number correlation described in AFATL-TR-73-214, Phase 1, Page 122, are applicable to this aircraft characteristic.

EQUIPMENT IDENTIFICATION CODE NUMBER

NO.

A208

DEFINITION

Designates the source of the aircraft interface circuit with respect to its aircraft black box or component origin point.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

CARD DATA:

column(s)

STYLE

FORMAT

CHOICE/VALUE

47 - 49

DI-1

13

Equipment Identification Code Number

REMARKS:

Each aircraft data file may use this characteristic to record the origin of aircraft interface circuits. A code number (1 to 999) should be used in conjunction with a hard copy code number/equipment nomenclature dictionary for data correlation purposes.

This characteristic is not used by any of the analytical Phase 1 or 2 computer programs.

CHARA	CUPERT	STITC	TITLE

NO.

CONNECTOR IDENTIFICATION CODE NUMBER

A209

DEFINITION

Designates the connector used on the aircraft black box or component at the aircraft origin point of the interface circuit.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

All

CARD DATA:

CILIAN(S)

STYLE

FORMAT

CHOICE/VALUE

50 - 52

DI-1

I3

Connector Identification Code Number

REMARKS:

Each aircraft data file may use this characteristic to record the connector number used on the aircraft black box or component that generates (or receives) the aircraft circuit. A code number (1 - 999) should be used in conjunction with a hard copy code number/equipment connector part number dictionary for data correlation purposes.

This characteristic is not used by any of the analytical Phase 1 or 2 computer programs.

INTERFACE CONNECTION

NO.

A210

DEFINITION

Designates the pin number or letter associated with the aircraft equipment connector referenced in aircraft characteristic A209.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

All

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
53 - 54	AN or DI-1	A2,	Letter/Number
55	SEX	Al	Lower Case
56 - 58	AN or DI-1	A3	Terminal Number

REMARKS:

Refer to characteristic A209 for applicable remarks.

If the interface circuit source is connected to an equipment terminal post, (rather than a connector) the number of the terminal should be documented in card columns 56 - 58.

NO

ADAPTER CABLE JUNCTION - CONNECTOR ID CODE NO.

A211

DEFINITION

Identifies the connector type (in coded form) that is installed in aircraft to accept one or more different types of aircraft/store adapter cables.

CHARACTERISTIC BLOCK LETTER: B

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

60 - 62

DI-2

13

Connector Identification Code Number

REMARKS:

Each aircraft data file may use this characteristic to record the part numbers of aircraft adapter cable receptacles. A code number (1 - 999) should be used in conjunction with a hard copy code number/store adapter cable receptacle part number dictionary for lata correlation purposes.

This characteristic is not used by any of the analytical Phase 1 or 2 computer programs.

CHARACTERISTIC T	TITLE:			NO.				
ADAPTER CABI	ADAPTER CABLE JUNCTION - CONNECTOR PIN NUMBER A212							
DEFINITION								
	Designates the pin number or letter of the aircraft adapter cable receptacle that is used to terminate the aircraft interface circuit.							
receptacie ti	nat is used to	termina	ate the alrerant interia	ee circuit.				
				3-1				
CHARACTERISTIC	DIOCK IETTED.	1	SIGNAL CATEGORY:					
CARD DATA:	BLOCK LETTER.		DIGINE CHIEGOTT					
CAID DATA:								
column(s)	STYLE	FORMAT	CHOICE/VALUE					
63 - 64	SSM-2	A2,	Letter/Number					
65	SEX	Al	Lower Case					
REMARKS:								

DEE.INILION				
Designates the cable shield.		erface connecti	on is used to terminate	a
CHARACTERISTIC E	BLOCK LETTER:	SIGN	IAL CATEGORY:	
CARD DATA:				
colnan(s)	STYLE	FORMAT	CHOICE/VALUE	
69	SEX	Al.	Floating Shield Cir	cuit

REMARKS:

This column should be checked as required for conventional shielded wires and those installations where coaxial wire shields are individually terminated at interface connector pins.

AIRCRAFT STRUCTURE GROUND

NO. A214

DEFINITION

Designates that the aircraft side of the interface is directly connected to a structure ground, and the circuit is used for aircraft/store grounding (power return) purposes only.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

Power Only

CARD DATA:

COLUMN(S)

STYLE SEX

FORMAT Al CHOICE/VALUE

Aircraft Structure Ground

REMARKS:

Column 70 should also be checked if the aircraft circuit is indirectly connected to ground via a multi-grounding post terminal strip.

ARACTERISTIC	BLOCK L TTER:	В	SIGNAL CATEGORY: ALL	
RD DATA:				
LUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
71 - 72	DI-1	I2	Wire Size	
EMARKS:				

CHARACTERISTIC TITLE:

I/O POWER SOURCE

DEFINITION

Designates the interface circuit power source location.

CHARACTERISTIC FLOCK LETTER: B SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

66 SSM-2 2Al Aircraft Output

Aircraft Input

REMARKS:

Column 66 should be checked if the interface circuit is connected to, or switched to, a DC or AC power source that originates in the aircraft circuit may or may not contain a series or parallel load.

Column 67 should be checked if the interface circuit power source originates in the store, or if the circuit is a power return signal (that may originate in the aircraft) and is returned to ground in the aircraft via a switch or load located in the store.

All interface circuit structure ground connections (at the aircraft or store side of the interface) and floating shield circuits are considered as aircraft input circuits and should be checked accordingly.

Designates those individual circuit wire shields that are electricall connected together (in the aircraft) at the interface connector. CHARACTERISTIC BLOCK LETTER: B SIGNAL CATEGORY: All CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 68 SEA-2 Al. Wire Shield Group
connected together (in the aircraft) at the Interface connected. CHARACTERISTIC BLOCK LETTER: B SIGNAL CATEGORY: All CARD DATA: COLUMN: STYLE FORMAT CHOICE/VALUE
CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE
COLUMN(S) STYLE FORMAT CHOICE/VALUE
COLUMN(S) STILE Time Chield Group
SEA-2 Al. Wire Shield Group

CARD NUMBER

В

NO. A225

DEFINITION

Provides a means to identify data cards for deck set-up purposes.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
73	SEA-1	Al	Characteristics Block Letter B
74 - 75	DI-1	12	Station Reference
77 - 79	DI-1	13	Data Card
80	SEA-2	Al	Continuation Card Letter

REMARKS:

Refer to characteristic AllO for the rationale used to assign card numbers.

A data card must be provided for each pin associated with the aircraft interface connector. Unused connector pins should be identified with a blank card (except for card number).

AIRCRAFT CIRCUIT FUNCTION NO. (SIGNAL FORM FORMAT)

NO. **A300**

DEFINITION

Defines the aircraft circuit associated with each interface connector pin in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
1 - 2	DI-1	12	Station Reference	
4 - 6	DI-1	13	Circuit	
7	SEA-2	Âl	Branch	
8	SEA-2	Al	Ground	

REMARKS:

Refer to characteristic A200 for the rationale used to assign aircraft circuit function numbers.

NO.

AIRCRAFT CIRCUIT CONFIGURATION ON STATE

A301

DEFINITION

Defines the overall electrical characteristics of aircraft circuit in a form suitable for aircraft/store interface circuit compatibility testing.

CHARACTERISTIC BLOCK LETTER:

C

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
10	SSM-1	2A1	Source - Power
11			Return
12	MSM-2	3A1	Circuit Type - Circuit Load
13			Circuit Switch
14			Current Limiter

REMARKS:

The following rationale should be used for documenting the on state configuration of aircraft circuit functions.

Columns 10 & 11, the on state circuit power source documentation procedure is identical to that described for characteristic A216. Aircraft output and input circuits are equivalent to source power and source return circuits respectively.

AIRCRAFT CIRCUIT CONFIGURATION ON STATE

A301

PEMARKS

- The Circuit Load column should be checked if the aircraft circuit contains a series load. It is assumed that mating store circuit will either switch, or directly connect this circuit to ground.
- Column 13. The Circuit Switch column should be checked if the air-craft circuit contains a switching means that can interupt the interface circuit.
- Column 14. The Current Limiter column should be checked if the aircraft circuit contains a series current limiting resistance.

AIRCRAFT CIRCUIT CONFIGURATION OFF STATE

10.

A302

DEFINITION

Defines the technique or normal circuit design employed in the aircraft for handling inactive interface circuit connections.

CHARACTERISTI	C BLOCK LETTER:	С	SIGNAL CATEGORY: All Except Sensor
CARD DATA:			THE INCEPT BENSOF
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
16	SSM-1	3Al	Parallel Load to Ground
17			Grounded
18			Open Circuit

REMARKS:

The following rationale should be used for documenting the off state configuration of aircraft circuit functions.

Column 16. The parallel load to ground column should be checked if the aircraft circuit incorporates a high impedence path to ground. Such paths may be possible due to existing parallel loads that may be connected to the circuit in the aircraft. In other cases the aircraft circuit may be intentionally loaded to ground for normal operating purposes.

NO. CHARACTERISTIC TITLE: AIRCRAFT CIRCUIT CONFIGURATION OFF STATE A302 REMARKS

- The ground column should be checked if the aircraft Column 17. circuit is directly connected to, or is switched to ground through a near zero impedence ground path.
- The open circuit column should be checked if the aircraft circuit is physically broken by a relay or Column 18. switch contact.

SHEET 2 OF

CIRCUIT VOLTAGE SOURCE VALUE MINIMUM/MAXIMUM VOLTS

A303

NO.

DEFINITION

Designates the minimum and maximum voltage applied to the aircraft circuit under normal aircraft power supply operating conditions.

CHARACTERISTIC BLOCK LETTER: C

SIGNAL CATEGORY:

Δ13

CARD DATA.

column(s)	STYLE	FORMAT	CHOICE/VALUE
23 - 26	DR-2	F4.0	Minimum Volts
27 - 30	DR-2	F4.0	Maximum Volts

REMARKS:

The voltage value specified in columns 23-26 and 27-30 should be the minimum and maximum voltage that may be expected at the aircraft circuit breaker or other over current protection component that is used to power the aircraft interface circuit.

This characterictic is only applicable to aircraft output circuits that do not contain a series load on the aircraft side of the interface connection.

CHARACTERISTIC TITLE: NO. A304 CIRCUIT VOLTAGE TYPE DEFINITION Defines the type of voltage that is used by the aircraft to power the respective interface circuit. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: C CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE AC (400 H_Z) SSM-2 3Al 31 DC 32 Other 33

REMARKS:

Column 33. Should be checked if the interface circuit is powered by a special type power supply that is unique to certain store circuits.

This Characteristic is only applicable to aircraft output circuits that do not contain a series load on the aircraft side of the interface connection.

MINIMUM INTERFACE VOLTAGE

NO.

A305

DEFINITION

Specifies the minimum voltage that will be applied to the aircraft/store interface connection under the worst case aircraft power supply/maximum aircraft circuit resistance conditions.

CHARACTERISTIC BLOCK LETTER:

C

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

34 - 37

DR-2

F4.0

Minimum Interface Voltage

REMARKS:

This characteristic is only applicable to aircraft output circuits that do not contain a series load on the aircraft side of the interface connection.

AIRCRAFT CIRCUIT BREAKER SOURCE-COMPONENT IDENTIFICATION CODE NO.

A306

NO.

DEFINITION

Provides a Data File code number reference that may be used to record the part number/identification of the aircraft circuit breaker used to power the respective interface circuit.

CHARACTERISTIC BLOCK LETTER: C

SIGNAL CATEGORY:

ALL

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

39 - 41

DI-2

13

Component Identification Code Number

REMARKS:

Each aircraft data file may use this characteristic to record the part number/identification of all aircraft stores management circuit breakers. A code number (1 to 999) should be used in conjunction with a hard copy code no./circuit breaker identification dictionary for data correlation purposes.

This characteristic is not used by any of the analytical Phase 1 or 2 computer programs.

NO.

AIRCRAFT CIRCUIT BREAKER SOURCE RATING (AMPS)

A306A

DEFIN TON

Designates the current rating used to power the aircraft interface circuit.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

42 - 43

DI-2

12

Ratings (AMPS)

REMARKS:

Circuit Breaker ratings that do not conform to integer values should be documented to the lowest whole integer value. For example, "7.5" AMP Rating should be documented as "7".

CHARACTERISTIC TITLE:	CIL	ADA	CUPTIT	CHI	4	וחדיו	To.
-----------------------	-----	-----	--------	-----	---	-------	-----

AIRCRAFT CIRCUIT LOAD LIMITATIONS STEADY-STATE CURRENT (AMPS)

A307

NO.

DEFINITION

Designates the maximum steady state current that may be either carried or switched by aircraft output circuits.

CHARACTERISTIC BLOCK LETTER: C

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

44 - 47

DR-2

F4.0

Steady State Current (AMPS)

REMARKS:

The value documented in columns 44-47 should be based on the limits of the worst case current carrying or switching component in the aircraft circuit. For example, an aircraft circuit may contain a series relay contact (Rated At 10 AMPS) that is powered from a 7.5 AMP circuit breaker. In this case, the limits of the circuit breaker rather than the relay contact should be documented.

CHARACTERISTIC TITLE: AIRCRAFT CIRCUIT LOAD LIMITATIONS -NO. TRANSIENT CURRENT (AMPS) A308 DEFINITION Designates the maximum transient current that may be either carried or switched by aircraft output circuits. CHARACTERISTIC BLOCK LETTER: SIGNAL CATEGORY: C All Except Sensor CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 48 - 51 DR-2 F4.0 Current (AMPS)

REMARKS:

Refer to Characteristic A307 for Applicable Remarks.

CHARACTERISTIC TITLE: AIRCRAFT CIRCUIT LOAD LIMITATIONS - NO.

TRANSIENT CURRENT TIME (SEC) A309

DEFINITION

Designates the duration of the transient current (Specified in

Designates the duration of the transfent current (specified in characteristic A308) in seconds.

CHARACTERISTIC BLOCK LETTER: C SIGNAL CATEGORY

SIGNAL CATEGORY All Except Sensor

CARL DATA:

52 - 54 DR-2 FORMAT CHOICE/VALUE FORMAT Time (Sec.)

REMARKS:

This characteristic is used in conjunction with characteristic A308 to describe the transient current limitations of the aircraft output circuit.

AIRCRAFT LOAD LIMITING COMPONENT IDENTIFICATION CODE NUMBER

NO.

A310

DEFINITION

Provides a Data File code number reference that may be used to record the part number/identification of the worst case load carrying/switching component in the aircraft circuit.

CHARACTERISTIC BLOCK LETTER: C

SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

55 - 57

DI-2

13

Component Identification Code Number

REMARKS:

Each aircraft data file may use this characteristic to record the part number/identification of the subject aircraft component. A code number (1-999) should be used in conjunction with a hard copy code number/component partidentification dictionary for data correlation purposes.

This characteristic is not used by any of the Phase 1 or 2 analytical computer programs.

	T WIRE RESI	STANCE	NO. A311
means to record ircuit.	the total w	ire resistance of	the aircraft
BLOCK LETTER: C	SIG	NAL CATEGORY: All	
STYLE	FORMAT	CHOICE/VALUE	
DR-2	F4.0	Aircraft Wire	Resistance
cteristic is no computer progr	t used by a ams.	ny of the Phase 1 o	or 2
	means to record ircuit. BLOCK LETTER: C STYLE DR-2	Means to record the total wircuit. BLOCK LETTER: C SIG STYLE FORMAT DR-2 F4.0	MEANS to record the total wire resistance of ircuit. PLOCK LETTER: C SIGNAL CATEGORY: All STYLE FORMAT CHOICE/VALUE DR-2 F4.0 Aircraft Wire cteristic is not used by any of the Phase 1 of the content of the conten

CHARACTERISTIC TITLE: SENSOR CIRCUIT SIGNAL FORM/LOGIC CHARACTERISTIC CODE NO.

NO. **A312**

DEFINITION

Designates a code number that is used to identify the signal form and logic characteristics of Sensor type aircraft interface circuits.

CHARACTERISTIC BLOCK LETTER: C SIGNAL CATEGORY: Sensor Only

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

62 - 65 DI-2 I4 Sensor Circuit Code No.

REMARKS:

The complete electrical characteristics of all unique types of aircraft/store sensor circuits will be eventually documented in hard copy format. Each unique circuit type will be assigned a code number which will be used by the Phase 1 and 2 analytical computer programs for circuit sorting and interface compatibility testing purposes.

CHARACTERISTIC TITLE: PARALLEL AIRCRAFT CIRCUITS

NO. A313

DEFINITION

Provide a means to calulate the total circuit load connected to each aircraft output circuit.

C ARACTERISTIC BLOCK LETTER:

C

SIGNAL CATEGORY: All Except Sensor

CARL DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VATUE

66 - 67

DI-2

12

Parallel Aircraft Circuit Store Load Multiplication Factor

REMARKS:

Characteristics A313 and A314 are used as cues by the Phase 2 air-craft/test case store interface compatibility program to determine the total load imposed on the aircraft output circuit.

A check mark in the column 68 (Chara. A314) indicates that the respective aircraft circuit has one or more parallel connections to other aircraft station equipment interface connectors or aircraft loads.

The total load of each parallel load connected to the aircraft output circuit must be determined by manual means. Once determined, this value is converted into a store load multiplication factor and is then documented in columns 66-67.

NO. A313

REMARKS

The procedure to be used for determining the correct store load multiplication factor is as follows:

- a) Summate the total steady state current load of all parallel circuits that are connected to the aircraft output circuit. The circuit load of the station being documented should be excluded from this summation.
- b) Compare the value summated in paragraph a) with the steady state current value documented in characteristic A307, and determine how many times greater the total stations/aircraft load is with respect to the load of the circuit being documented.
- c) The multiple determined in paragraph b) is the multiplication factor that should be documented in columns 66-67. This factor value should be converted to the closest integer (whole) number.

SHEET 2 OF 2

NO.

SUMMATE PARALLEL CIRCUIT STORE LOAD

A314

DEFINITION

Indicates that the respective aircraft output circuit has parallel connections to other aircraft station interface connectors and/or other aircraft component loads.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

58

SEA-2

Al

Summate Parallel Circuit Store Load

REMARKS:

Refer to characteristic A313 for applicable remarks.

A same code letter (A to Z) should be documented in column 68 for all other interface circuits that are terminated at the same interface connector and are controlled from the same aircraft output circuit.

A unique code letter should be assigned to those circuits associated with each different aircraft output circuit.

MULTI-WIRE STORE CONNECTION

NO.

A315

DEFINITION

Designates that the aircraft interface circuit is one of several parallel jumper wires that are connected to individual aircraft connector pins and have no other electrical function in the aircraft.

CHARACTERISTIC BLOCK LETTER: C

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

21

SEA-2

Al

Multi-Wire Store Connection

REMARKS:

All interface connector pins that are jumpered together in the aircraft should be coded with a letter (A-Z). A unique letter should be used if more than one set of multi-wire connections are used by the aircraft interface connector.

Refer to store characteristic El64 for additional remarks.

CARD NUMBER NO.

A325

DEFINITION

Provides a means to identify data cards for deck set up purpose.

CHARACTERISTI	C BLOCK LETTER:	C SI	IGNAL CATEGORY: N/A
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
,9	SEA-l	Al	Characteristic Block Letter C
0 - 72	DI-1	13	Store Group Code Number
71 75	DI-1	12	Susp. Device Group Code No.
77 - 79	DI-1	13	Circuit Card
80	SEA-2	Al	Supplement Card Letter

REMARKS:

The rationale used for the assignment of card numbers for characteristic data blocks C, D, E, and F is identical to that described for characteristic AllO with the following exceptions:

- Columns 70-72. These columns are used to document the store group (if applicable) associated with the interface circuit.
- Columns 74-75. These columns are used to document the suspension device group (if applicable) associated with the interface circuit.

A data card must be provided for each pin associated with the aircraft interface connector. Unused connector pins should be identified with a blank card (except for card number).

AIRCRAFT CIRCUIT FUNCTION NO. (SIGNAL LOGIC FORMAT)

NO. A400

DEFINITION

Defines the aircraft circuit associated with each interface connector pin in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

Ground

ΔT.T.

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
1 - 2	DI-1	15	Station Reference
4 - 6	DI-1	13	Circuit
7	SEA-2	Al	Branch

SEA-2 Al

REMARKS:

Refer to characteristic A200 for the rationale used to assign aircraft circuit function numbers.

RELEASE OPERATE FUNCTION PYLON JETTISON CIRCUITS

NO. A4OL

DEFINITION

Defines the usage of aircraft pylon jettison circuits terminated at the aircraft weapon station.

CHARACTERISTIC	C BLOCK LETTER: D		SIGNAL CATEGORY: Release Only
CARIN DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
10	SSM-2	4A1	Selective
11			Combat
12			Emergency
13			(not used)

REMARKS:

- Column 10. The selective choice should be used if the aircraft pylon jettison circuit is controlled by a means which enables the pilot to select individual (or pairs) of weapon station pylons for jettison purposes.
- Column 11. The combat choice should be used if the aircraft pylon jettison circuit is controlled by a means which permits the jettison all pylons that may be carrying non-air to air ordance.
- Column 12. The emergency choice should be used if the aircraft pylon jettison circuit is controlled by a means that initiates the jettison of all pylons, regardless of the store types they may be carrying.

This characteristic is not functional with any of the Phase 1 or 2 analytical computer programs. The AFATL Store Data File does not include any interface data for pylon interface connect-

CHARACTERISTIC TITLE: RELEASE OPERATE FUNCTION BOMB RACK NO. CIRCUITS A402

DEFINITION

Defines the usage of aircraft release circuits terminated at the aircraft weapon station bomb rack.

SIGNAL CATEGORY: Release Only CHARACTERISTIC BLOCK LETTER: CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 14 SSM-2 5A1 Normal Eject 15 Auxiliary Eject 16 Selective Store Jettison 17 Combat Store Jettison 18 (Not Used)

REMARKS:

- The normal eject choice should be used if the aircraft Column 14. release circuit is provided for normal ejection (primary method used for delivering ordnance) of the store that is attached to the station bomb rack.
- Column 15. The auxiliary eject choice should be used if the aircraft release circuit is controlled by a means exclusively used for back up release of the store from the bomb rack.

RELEASE OPERATE FUNCTION-BOMB RACK CIRCUITS

NO. A402

REMARKS

- Column 16. The selective store jettison choice should be used if the aircraft release circuit is controlled by a means exclusively used for jettisoning stores from selected station bomb racks.
- Column 17. The combat store jettison choice should be used if the aircraft release circuit is controlled by a means exclusively used for jettisoning all non-air to air ordnance from their respective aircraft weapons station bomb racks.

CHARACTERISTIC TITLE: RELEASE CPERATE FUNCTION -NO. A403 LAUNCHER CIRCUITS DEFINITION Defines the usage of aircraft release circuits terminated at the aircraft weapon station launcher. CHARACTERISTIC BLOCK LETTER: SIGNAL CATEGORY: Release only CARD DATA: COLUMN(S) STYLE FORMAT. CHOICE SAINE 19 SSM-2 8A1 Launch Initiate 20 Store Launch Commund 21 Launch Nermal 22 Launch Jettison 23 Eject Jettison 24 (Not used) 25 (Not used) 26 (Not used) REMARKS: Column 19. The launch initiate choice should be used if the aircraft release circuit logic is designed to initiate a launch sequence between the aircraft and the store. The store launch command choice should be used if the Column 20. aircraft release circuit logic is designed to accept a launch/eject command signal that is generated within the launcher or by its attached store. Column 21. The launch normal choice should be used if the aircraft release circuit logic is designed directly to launch a store's) from the launcher. This circuit type

SHEET 1 OF 2.

choice may also be used for store interface functions that normally occur simultaneously with store launch.

RELEASE OPERATE FUNCTION - LAUNCHER CIRCUITS

NO. A403

REMARKS

- Column 22. The launch jettison choice should be used if the air-craft release circuit logic is designed exclusively for unarmed/unguided launching of a store.
- Column 23. The eject jettison choice should be used if the air-craft release circuit logic is designed exclusively for the emergency ejection (downward or rearward) of the store from the launcher.

RELEASE OPERATE FUNCTION - STORE INTERFACE CIRCUITS

NO. A404

DEFINITION

Defines the usage of aircraft release circuits terminated at the aircraft weapon station interface connector.

SIGNAL CATEGORY: Release Only CHARACTERISTIC BLOCK LETTER: D CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 27 SSM-2 7A1 Sub Rack Eject/Jettison 28 Store Dispense 29 Store Firing 30 Launch Initiate 31 Store Launch Command 32 Launch Signal 33 Store Step Only

REMARKS:

- Column 27. The Sub Rack Eject/Jettison choice should be used if the aircraft release circuit logic is designed to eject or jettison stores from secondary bomb racks that are connected to multiple and triple ejector racks.
- Column 28. The Store Dispense choice should be used if the air-craft release circuit logic is designed to initiate the dispensing of sub munitions from airborne dispensers.

RELEASE OPERATE FUNCTION STORE INTERFACE CIRCUITS

NO. A404

REMARKS

- Column 29. The Store Firing choice should be used if the air-craft release circuit logic is designed to initiate the firing of rocket pods, gun pods, and all other types of forward firing ordnance.
- Columns 30 32 (same as characteristic A402)
- Column 33. The Store Step Only choice should be used if the air-craft release circuit is exclusively used to control station stepper mechanisms that may be installed in multiple ejector racks (MER) or other similar stores.

SHEET 2 OF 2

CHARACTERISTIC	TITLE

MASTER ARMAMENT SWITCH

NO. A405

DEFINITION

Designates that the aircraft release circuit is directly or indirectly controlled by the aircraft's master armament switch.

CHARACTERISTIC BLOCK LETTER: D

SIGNAL CATEGORY: Release & Control

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

34

SEX

Al

Master Arm Switch

REMARKS:

This column should be checked if the aircraft release circuit is used exclusively for the gun firing purposes and the aircraft is only equipped with a gun safety switch.

	TITLE:	OUND SAFETY		NO. A406
indirectly	controlled by	an interlock	ircuit is directly circuit that will rcraft is not in fl	
HARACTERISTIC	BLOCK LETTER:	D SIGN	AL CATEGORY: Release	& Control
ARD DATA:				
COLUMN(S) 35	STYLE SEX	FORMAT Al	CHOICE/VALUE Ground Safety	
	n should be o	hecked if the	aircraft ground saf	ety interloc
This colum	n should be o	hecked if the	aircraft ground safer equivalent) switch	ety interloc
This column	n should be c	hecked if the by a toggle (o	aircraft ground safer equivalent) switc	ety interloc
REMARKS: This columnis manuall;	n should be o	hecked if the by a toggle (o	aircraft ground safer equivalent) switc	ety interloc

RELEASE INITIATE SWITCH

A407

DEFINITION

Designates the aircraft switch used to initiate the aircraft release circuit.

CHARACTERISTIC BLOCK LETTER: D

SIGNAL CATEGORY: Release Only

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
36	SSM-2	3A1	Bomb/Rocket Button
37			Trigger
38			Other

REMARKS:

- Column 36. This column should be checked if the aircraft release circuit is directly or indirectly (via bombing computer, etc.) initiated by pressing the stick grip bomb/rocket button.
- Column 37. This column should be checked if the aircraft release circuit is directly or indirectly (via gun control box) initiated by pressing the stick grip trigger switch.
- Column 38. This column should be checked if the aircraft release circuit is initiated by a unique control switch.

NO. CHARACTERISTIC TITLE: A408 MONITOR OPERATE FUNCTION DEFINITION Defines the specific usage of the aircraft monitor circuit. SIGNAL CATEGORY: Monitor Only CHARACTERISTIC BLOCK LETTER: D CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT SSM-2 4Al Display Store Presense 40 Store Identification 41 Circuit Switching Logic 42 Store Quantity 43 REMARKS: This column should be checked if the aircraft monitor Column 40. circuit logic is designed to accept a discrete signal from the store that indicates the presense or absense of a store. This column should be checked if the aircraft monitor Column 41. circuit logic is designed to accept a discrete or digital signal from the store that may be used for store type identification purposes. Column 42. This column should be checked if the aircraft monitor circuit logic is designed to use this input connection for sensing an electrical event that occurs within the

SHEET 1 OF 2

store status information.

store that is not directly related to the display of

MONITOR OPERATE FUNCTION

NO. A408

REMARKS

Column 43. This column should be checked if the aircraft monitor circuit logic is designed to accept a digital signal from the store that indicates the quantity of stores or sub-munitions remaining.

SHEET 2 OF 2

INITION				
esignates	the termination	on point of th	e Aircraft Moni	tor Circuit
\RACTERISTIC	BLOCK LETTER:	D SIGN	NAL CATEGORY: MO	mitor Only
RD DATA:				
LUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
1414	SSM-2	2A1	Suspension	n Device
45			Store	
REMARKS:				

STATION MONITOR POINT

NO. A410

DEFINITION

Designates that the aircraft monitor circuit terminates at a point in the aircraft's weapon station pylon or adapter, and has no direct interface with a store or suspension device.

CHARACTERISTIC BLOCK LETTER:

D

SIGNAL CATEGORY:

Monitor Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

46

SEX

Al

Station Monitor Point

REMARKS:

This characteristic is provided for data file growth purposes only and is not used by any of the Phase 1 or 2 analytical computer programs.

At present, the AFATL store data file does not include interface data for pylons or adapters.

CHARAC'	TERISTIC	TITLE:
---------	----------	--------

OPERATIONAL STATUS DISPLAY NOMENCLATURE CODE NUMBER

NO.

A411

DEFINITION

Designates a code number that is used by the system to determine the compatibility between aircraft operational status display message provisions and store operational status display message requirements.

CHARACTERISTIC BLOCK LETTER: D SIGNAL CATEGORY: Monitor Only

CALLO DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

47 - 49 DI-2 13 Operational Status Display Code Number

REMARKS:

Operational status code numbers (1 to 999) may be used in conjunction with a hard copy code number/status display message nomenclature dictionary for display message correlation purposes.

DEFINITION	-		LABLE NO.	
DEL TIMITION				
Designates ability to a ware change.	accommodate.	craft stores many required d	management system has the display message by soft-	
CHARACTERISTIC	BLOCK LETTER:	D SIG	NAL CATEGORY: Monitor Only	,
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
50	SEX	Al	Spare Display Availa	ble
REMARKS:				
REMARKS;				
REMARKS:				

INFLIGHT SELECTION

NO. A413

DEFINITION

Defines the method used in the aircraft to control the operation of the aircraft interface circuit.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: Control Only

CARD DATA:

column(s)

STYLE

FORMAT

CHOICE/VALUE

51

SSM-2

2A1

Direct Option

52

Automatic Control

REMARKS:

- Column 53. This column should be checked if the aircraft control circuit is directly or indirectly controlled by the pilot for inflight management of store functions.
- Column 54. This column should be checked if the aircraft control circuit is operated by an automatic means. Meaning, the circuit is applied to the store interface when power is applied to the aircraft, the station is selected, an overload condition is detected, or any other similar condition that is not under direct control of the pilot.

CONTROL LOGIC BREAK

NO. A414

DEFINITION

Defines the complexity of the logic used in the aircraft for controlling the respective interface circuit.

CHARACTERISTIC BLOCK LETTER: D SIGNAL CATEGORY: Control Only

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

53 SSM-2 2Al Single Break

54 Multiple Break

REMARKS:

- Column 53. This column should be checked if the aircraft circuit is controlled by a single pilot switching action. Meaning, the circuit is not influenced by other logic that may effect the operation of the circuit.
- Column 54. This column should be checked if the aircraft circuit is controlled by a complex of inter-relating logic switching events.

CHARACTERISTIC TITLE: POWER SIGNAL LOGIC NO. A415

DEFINITION

Designates the usage of aircraft interface circuits assigned to the power signal category.

CHARACTERISTI	C BLOCK LETTER:	D	SIGNAL CATEGORY: Power Only
CARD DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
55	SSM-2	3A1	Power Source
56			Power Return
57			Circuit Shield

REMARKS:

- Column 55. This column should be checked if the aircraft interface circuit is used for applying power (AC or DC) to the equipment interface connection.
- Column 56. This column should be checked if the aircraft interface circuit is a power return (ground) circuit.
- Column 57. This column should be checked if the aircraft interface circuit is used to terminate the shield of a shielded or coaxial cable.

SENSOR CIRCUIT SIGNAL FORM/ LOGIC CHARACTERISTIC CODE NO. NO.

A416

DEFINITION

Designates a code number that is used to identify the signal form and logic characteristics of sensor type aircraft interface circuits.

CHARACTERISTIC BLOCK LETTER:

n

SIGNAL CATEGORY: Sensor Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

58 - 61

DI -2

14

Sensor Circuit Code No.

REMARKS:

Refer to characteristic A312 for applicable remarks.

Designates more than				
ARACTERISTIC	PLOCK LETTER:	D SIG	NAL CATEGORY: ALL	
RE DATA:				
LUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
62	SEX	Al	Station Isolation	
				TOTAL PROPERTY OF
REMARKS:				
REMARKS:				TO LOCAL TO THE WAY AND THE TO
REMARKS:				
EMARKS:				

CHARACTERISTIC TITLE:

UNIQUENESS

DEFINITION

Designates that the aircraft interface circuit is used for a specific function which is dedicated to a certain type store.

CHARACTERISTIC BLOCK LETTER: D SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

63 SEX Al Uniqueness

REMARKS:

This characteristic mainly applies to aircraft circuits that are used to control critical special weapon control and lock circuitry.

'HARA'TEFISTIC	TITLE:	ON SELECT		NO. A419
DEFINITION Designates network tha	that the aircat includes st	eraft interfac cation selecti	e circuit is contro on logic.	lled by a
CHARACTERISTIC	BLOCK LETTER:	D SIG	NAL CATEGORY: All	
CARD DATA:				
COLUMR(S)	STYLE	FORMAT	CHOICE/VALUE	
64	SEX	Al	Station Select	
REMARKS:				
				SHEET 1 OF

CHARACTERISTIC TITLE: NO. CONTROL CIRCUIT LOGIC A420 OPERATE FUNCTION CODE NO. DEFINITION

Designates a code number that may be used to describe the exact logic used in the aircraft to control the interface circuit.

CHARACTERISTIC BLOCK LETTER: D SIGNAL CATEGORY: Control Only CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 65 - 68 DI-2 14 Control Circuit Logic Operate Function Code No.

REMARKS:

This characteristic is non-functional and is provided on the data documentation format for system growth purpose only.

CHIA	FAL	TER.	IST	If.	TITLE:

OPERATIONAL STATUS (MONITOR DISPLAY CIRCUITS)

A421

DEFINITION

Designates that the aircraft monitor circuit is able to display a status message that is required by the respective aircraft/store interface circuit.

CHARACTERISTIC PLOCK LETTER: D

SIGNAL CATEGORY:

Monitor Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

39

SEX

A1

Operational Status Display

REMARKS:

Characteristic A421 is used in conjunction with characteristic A411 to define the operational status message associated with the interface circuit.

CARD NUMBER

NO. A425

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER: D

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
69	SEA-1	Al	Characteristic Data Block D
70 - 72	DI-1	13	Store Group Code No.
74 - 75	DI-1	12	Susp Device Group Code No.
77 - 79	DI-1	13	Circuit Card
80	SEA-2	A1	Supplement Card Letter

REMARKS:

Refer to characteristic A325 for applicable remarks.

AIRCRAFT CIRCUIT FUNCTION NO. (SWITCHING FORM/TIME FORMAT)

NO. A500

DEFINITION

Defines the aircraft circuit associated with each interface connector pin in coded form.

SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Station Reference 12 1 - 2 DI-1 4 - 6 Circuit DI-1 13 SEA-2 Al Branch Ground Al SEA-2

REMARKS:

Refer to characteristic A200 for the rationale used to assign aircraft circuit function numbers.

CHARACTERISTIC TITLE: CIRCUIT SWITCHING FORM - 1/0 POWER SOURCE NO. A501

DEFINITION

Designates the interface circuit power source location.

CHARACTERISTIC BLOCK LETTER: E SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

10 SSM-1 3Al Aircraft Output Circuit

11 Aircraft Input Circuit

12 Other

REMARKS:

Refer to characteristic A216 for applicable remarks.

Column 12. This column should be checked if the aircraft circuit is used to terminate a wire shield, or is a multi-wire connection as defined in characteristic A315.

CHARACTEPETTIC TITLE:

CIRCUIT SWITCHING FORM-AIRCRAFT OUTPUT CIRCUITS NO.

A502

DEFINITION

Designates the type of aircraft output circuit used to control the time duration of the respective interface circuit.

CHARACTERISTIC BLOCK LETTER: E

SIGNAL CATEGORY: All Except Sensor

CARS DATA:

TARGURIA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
14	SSM-2	4A1	Maintained	
15			Momentary	
16			Pulsed	
17			Non Switched	

REMARKS:

- Column 14. This column should be checked if the aircraft output circuit generates a continuous signal that can be switched to an off-state.
- Column 15. This column should be checked if the aircraft output circuit generates a momentary signal.
- Column 16. This column should be checked if the aircraft output circuit generates a pulsating DC signal.
- Column 17. This column should be checked if the aircraft output circuit is directly connected to a power source.

CHARACTERISTIC TITLE: CIRCUIT SWITCHING FORM -AIRCRAFT INPUT CIRCUITS A503 DEFINITION Designates the type of store output circuit required for normal aircraft interface circuit operation. SIGNAL CATEGORY: All except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE MSM-2 5A1 Maintained 21 Momentary 22 Pulsed 23 Non Switched 24 Optional REMARKS: Column 20. This column should be checked if the aircraft input circuit requires a maintained on or off signal from the store. Column 21. This column should be checked if the aircraft input circuit requires a momentary on or off signal from the store. Column 22. This column should be checked if the aircraft input circuit requires a pulsating DC signal from the store. Column 23. This column should be checked if the aircraft input circuit requires that the store signal be non switched and directly connected to a power source. Column 24. This column should be checked if the aircraft input

store output circuit.

circuit is capable of being operated from any type of

AIRCRAFT OUTPUT CIRCUIT COMPONENT IDENTIFICATION CODE NO.

A504

NO.

DEFINITION

Designates a code number that may be used to identify the type and part number of the primary aircraft output circuit switching device.

CHARACTERISTIC BLOCK LETTER:

F

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

25 - 27

DI-2

13

Component Ident Code No.

REMARKS:

This characteristic code number may be used in conjunction with a hard copy code number/output circuit component identification dictionary for data correlation purposes.

This characteristic is not used by any of the Phase 1 or 2 analytical computer programs.

CIRCUIT INITIATE DELAY TIME -VARIABLE SETTING

NO.

A505

DEFINITION

Designates that the aircraft contains a means to vary the time between circuit initiate and actual application of the output signal to the store interface connection.

CHARACTERISTIC BLOCK LETTUR:

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

28

SEX

Al

Variable Setting

REMARKS:

Characteristics A505, A506, and A507 are all related to circuit initiate delay time documentation for either aircraft output or aircraft input interface circuits.

If the circuit being documented is an aircraft output circuit the times documented in A506 and A507 should specify the extreme delay times that can be generated by the aircraft.

If the circuit being documented is an aircraft input circuit, the times documented in A506 and A507 should specify the extreme delay times that can be accepted by the aircraft for normal circuit operation.

CHARACTERISTIC TITLE: CIRCUIT INITIATE DELAY TIME -NO. MINIMUM TIME (Sec) A506 DEFINITION Designates the minimum time the aircraft output circuit may be adjusted (or is fixed) to delay the time between circuit initiate and the actual application of the output signal to the store interface connection. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT 29 - 32 DR-2 F4.0 Minimum (Sec) REMARKS: Refer to characteristic A505 for applicable remarks.

104

CHARACIERIBIIC		JIT INITIATE MUM TIME (Sec		NO. A507
DEFINITION	Н			
adjusted (and the ac face conne	or is fixed) tual application.	to delay the ion of the ou	raft output circui time between circu tput signal to the	it initiate
CHARACTERISTIC	BLOCK LETTER:	E SIC	NAL CATEGORY: All Ex	cept Sensor
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALUE	
33 - 36	DR-2	F4.0	Maximum (Sec)	

REMARKS:

Refer to characteristic A505 for applicable remarks.

CHARACTERISTIC TITLE: CIRCUIT ON OR OFF TIME - VARIABLE SETTING

SEX

A508

NO.

Variable Setting

DEFINITION

38

Designates that the aircraft contains a means to vary the time duration (on or off) of the output signal that is applied to the store interface connection.

CHARACTERISTIC BLOCK LETTER: E SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN:(S) STYLE FORMAT CHOICE/VALUE

Al

REMARKS:

Characterics A508, A509, A510, and A511 are all related to circuit on/off time documentation for either aircraft output or aircraft input interface circuits.

If the circuit being documented is an aircraft output circuit the times documented in A509 and A510 should specify the extreme on or off times of momentary (or pulsed) aircraft output signals. Characteristic A511 should be checked if the aircraft output circuit is a maintained or non switched signal.

If the circuit being documented is an aircraft input signal, the times documented in A509 and A510 should specify the extreme on or off time that can be accepted by the aircraft for normal circuit operation. Characteristic A511 should be checked if the aircraft circuit requires a maintained or non switched signal.

CHARAC"ERISTIC TITLE: CIRCUIT ON OR OFF TIME -NO. MINIMUM TIME (Sec) A509 DEFINITION Designates the minimum time the aircraft output circuit may be adjusted (or is fixed) to maintain the interface signal in an on or off state at the store interface connection. CHARACTERISTIC BLOCK LETTER: E SIGNAL CATEGORY: All Except Sensor CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE DR-2 F4.0 39 - 42 Minimum (Sec.)

REMARKS:

Refer to characteristic A508 for applicable remarks.

	BLOCK LETTER:	E	SIGNAL CATEGORY: All Exc	ept Sensor
ARI DATA:				
OLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
43 - 46	DR-2	F4.0	Maximum (Sec)	
REMARKS:				
	characteristi	c A508 for	r applicable remarks.	
	characteristi	.c A508 for	r applicable remarks.	
	characteristi	.c A508 for	r applicable remarks.	
	characteristi	.c A508 fo m	r applicable remarks.	
	characteristi	c A508 for	r applicable remarks.	
	characteristi	e A508 for	r applicable remarks.	
	characteristi	c A508 for	r applicable remarks.	

Designates that the aircraft output circuit is a continuous signal, or designates that an aircraft input circuit requires a continuous output signal from the store for normal aircraft circuit operation. CHARACTERISTIC BLOCK LETTER: E SIGNAL CATEGORY: All Except Ser CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 47 SEX Al Indefinite REMARKS: See characteristic A508 for applicable remarks.			CUIT ON O	R OFF TIME -	NO. A511
COLUMN(S) STYLE FORMAT CHOICE/VALUE 47 SEX Al Indefinite REMARKS:	Designates signal, or continuous	output signal	nat an air	compet immut aim-	and the course of
COLUMN(S) STYLE FORMAT CHOICE/VALUE 47 SEX Al Indefinite REMARKS:	ARACTERISTIC	BLOCK LETTER:	E	SIGNAL CATEGORY:	All Except Senso
47 SEX Al Indefinite REMARKS:	RD DATA:				
REMARKS:	LUMN(S)	STYLE	FORMAT	CHOICE/VA	LUE
	47	SEX	Al	Indefin	ite
	MARKS:				
	See charact	eristic A508	for appli	cable remarks.	

CIRCUIT DROPOUT DELAY TIME - VARIABLE SETTING

NO. A512

DEFINITION

Designates that the aircraft contains a means to vary the time between circuit reactivate and actual removal of the output signal from the store interface connection.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

All Except Sensor

CARD DATA:

COLUMN(S)
49

STYLE SEX FORMAT Al

CHOICE/VALUE
Variable Setting

REMARKS:

Characteristics A512, A513, and A514 are all related to circuit dropout delay time documentation for either aircraft output or aircraft input interface circuits.

If the circuit being documented is an aircraft output circuit, the times documented in A513 and A514 should specify the extreme delay times that can be generated by the aircraft.

If the circuit being documented is an aircraft input circuit, the times documented in A513 and A514 should specify the extreme delay times that can be accepted by the aircraft for normal circuit operation.

CHARACTERISTIC TITLE: CIRCUIT DROPOUT DELAY TIME - MINIMUM TIME (Sec)

DEFINITION

NO. A513

Designates the minimum time the aircraft output circuit may be adjusted (or is fixed) to delay the time between circuit deactivate and actual removal of the output signal from the store interface connection.

CHARACTERISTIC BLOCK LETTER: E SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

50 - 53 DR-2 F4.0 Minimum (Sec)

REMARKS:

Refer to characteristic A512 for applicable remarks.

NO. CHARACTERISTIC TITLE: CIRCUIT DROPOUT DELAY TIME -A514 MAXIMUM TIME (Sec) DEFINITION Designates the maximum time the aircraft output circuit may be adjusted (or is fixed) to delay the time between circuit deactivate and actual removal of the output signal from the store interface connection. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Maximum (Sec) F4.0 54 - 57 DR-2 REMARKS: Refer to characteristic A512 for applicable remarks.

CIRCUIT (OFF) DWELL TIME - VARIABLE SETTING

NO. **A51**5

DEFINITION

Designates that the aircraft contains a means to vary the off time between positive power pulses generated by pulsed type aircraft output circuits.

CHARACTERISTIC BLOCK LETTER:

E

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

59

SEX

Al

Variable Setting

REMARKS:

Characteristics A515, A516, and A517 are all related to circuit dwell time documentation for either aircraft output or aircraft input interface circuits.

If the circuit being documented is an aircraft output circuit, the times documented in A516 and A517 should specify the extreme circuit off dwell times that can be controlled by the aircraft.

If the circuit being documented is an aircraft input circuit, the times documented in A516 and A517 should specify the extreme circuit off dwell times that can be accepted by the aircraft for normal circuit operation.

CHARACTERISTIC TITLE: NO. CIRCUIT (OFF) DWELL TIME - MINIMUM TIME (Sec) A516 DEFINITION Designates the minimum time the aircraft output circuit may be adjusted (or is fixed) to control the off time between positive power pulses generated by pulsed type aircraft output circuits. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: E CARD DATA: STYLE FORMAT CHOICE/VALUE COLUMN(S) 60 - 63 DR-2 F4.0 Minimum (Sec) REMARKS: Refer to characteristic A515 for applicable remarks.

CHARACTERISTIC	CIRCUI	T (OFF) JM TIME (DWELL TIME - Sec)		NO. A51 7
adjusted (d	or is fixed) to	control	ircraft output c the off time be type aircraft ou	tween no	sitive
CHARACTERISTIC CARD DATA:	BLOCK LETTER:	E	SIGNAL CATEGORY:	All Exc	ept Sensor
column(s)	STYLE	FORMAT	CHOICE/VA	ALUE	
64 - 67	DR-2	F4.0	Maximu	m (Sec)	
REMARKS:					
Refer to ch	aracteristic A		applicable remar	ks.	

NORMALLY CLOSE SWITCH BREAK

NO. A520

DEFINITION

Designates aircraft output circuit characteristics associated with interface circuit interrupt signals.

CHARACTERISTIC BLOCK LETTER: E

SIGNAL CATEGORY: All Except Sensor

Required in Store

CARD DATA:

19

COLUMN(S) STYLE FORMAT CHOICE/VALUE

18 MSM-2 2A1 Exists in Aircraft

REMARKS:

- Column 18. This column should be checked if the aircraft output signal is normally in an on state (true) when the output circuit is inactive (not actuated), and is set to an off state (false) when the aircraft output circuit is active (actuated).
- Column 19. This column should be checked if the aircraft output circuit is dependent on a normally closed switch break (in the store) to open for correct aircraft circuit operation.

This characteristic is non-functional and is provided on the data documentation format for data file growth purposes only.

CARD NUMBER

NO. A525

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER:

E

SIGNAL CATEGORY:

N/A

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
69	SEA-1	Al	Characteristic Data Block E
70 - 72	DI-1	13	Store Group Code No.
74 - 75	DI-1	12	Susp Device Group Code No.
77 - 79	DI-1	13	Circuit Card
80	SEA-2	Al	Supplement Card Letter

REMARKS:

Refer to characteristic A325 for applicable remarks.

AIRCRAFT CIRCUIT FUNCTION NO. (SIGNAL SEQUENCE FORMAT)

NO. A600

DEFINITION

Defines the aircraft circuit associated with each interface connector pin in coded form.

SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT 1 - 2 Station Reference DI-1 12 4 - 6 Circuit DI-1 13 Branch SEA-2 Al SEA-2 Al Ground

REMARKS:

Refer to characteristic A200 for the rationale used to assign aircraft circuit function numbers.

CHARACTERISTIC	AL RU		CE CONNECTION - ICATION CODE NO.	NO. A600A
Designates the interface corcuit in co	nector associa	roup applica	bility of the airc e respective inter	eraft rface
CHARACTERISTIC	BLOCK LETTER:	F SIC	NAL CATEGORY: A	11
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALUE	
10 - 12	DI-1	13	Connector I Code Number	dentification
REMARKS:				
Refer to cha	racteristic Al	Ol for appl:	icable remarks.	

AIRCRAFT INTERFACE CONNECTION -NO. ARACTERISTIC TITLE: A600B CONNECTOR PIN IDENTIFICATION DEFINITION Designates the pin number or letter associated with the aircraft/store interface connection. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: A11 CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Letter/Number AN or A2 14 - 15 DI-1 Lower Case Al SEX 16 REMARKS: Refer to characteristic A204 for applicable remarks.

CHARACTERISTIC T		NEXT CIRCUIT	CARD (MFC)	NO. None
DEFINITION				
the next circ	uit data card	d is a branch	program to advise of a multi-functi same connector pi	on air-
CHARACTERISTIC I	BLOCK LETTER:	F SIGN	AL CATEGORY: All	
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
17	SEX	Al	Read Next Ci	rcuit Card
REMARKS:				
				SHEET 1 OF

INTERFACE CIRCUIT SIGNAL FUNCTION

NO. A601

PETRITION

Designates a function type for each aircraft interface circuit to identify the inter-relationship of all signals terminated at the aircraft/store interface connection.

HARACTERISTIC	* BLOCK LETTER:	F	SIGNAL CATEGORY: All
CAEL DATA:			
O. [2] [9] (#)	STYLE	FORMAT	CHOICE/VALUE
18	SSM-1	6Al	Prime Function Signal
10			Support Function Signal
20			Direct Power Return Circuit
21			Cable Shield Circuit
22			(Not Used)
23			(Not Used)

REMARKS:

Characteristics A601 and A602 are used to identify the overall on/off relationship of all aircraft circuits terminated at the aircraft/store interface connection. Essentially, each aircraft circuit is referenced to all other circuits by means of a data card matrix. If a signal is designated as a Prime Function Circuit, the status of all other associated aircraft interface circuits are specified on the same data card (refer to Figure 13 of AFATL TR-75-3, Volume I).

Two card columns are provided for each associated aircraft interface circuit.

The odd number column is used to indicate that the associated interface circuit is either active (present) or inactive (inhibited) when the prime function signal is not present (false) at the aircraft/store interface connection. The code letter "A" should be documented in the odd number column if the associated interface circuit is normally

NO. A601

REMARKS

active, or the code letter "I" should be documented if it is inactive. This procedure should be repeated for all the circuits that comprise the total aircraft interface connection. Unused pin connection columns should be left blank.

The even number card columns are used to indicate that the associated interface circuit is either active or inactive when the prime function signal is present (true) at the aircraft interface connection. The same card column documentation procedures as described for the not present (false) signal apply. The following rationals should be used to assign function types to aircraft interface circuits:

- Column 18. This column should be checked if the interface circuit is used to control a function that is directly used to initiate the arming, release, or jettison of the store. Signals that are used to transmit video or audio data, or are provided to actuate unique control circuits, are also to be considered as prime function circuits.
- Column 19. This column should be checked if the interface circuit is used to condition or make ready the operation of a prime function circuit. Examples of Support Function Signals are: Interlock Circuits, Operational Status Monitor Signals, Store Identification/Present Signals, etc.
- Column 20. This column should be checked if the interface circuit is a power return (ground) signal that contains no switching logic.
- Column 21. This column should be checked if the interface circuit is used to terminate the shield of a shielded wire or coaxial cable.

SHEET 2 OF 2

NO.

INTERFACE SIGNAL SWITCHING SEQUENCE ORDER

A601A

DEFINITION

Designate the sequence in which aircraft circuits are applied to, or are received from the aircraft/store interface connection.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)

FORMAT

CHOICE/VALUE

28 - 29

AN or DI-2

A2

Interface Signal Switching Sequence Order

REMARKS:

This characteristic uses a code number (1-99) or the letter (0) to specify the order of switching events that will take place (or is required) at the aircraft/store interface, based on the detail design of the aircraft's stores management system.

The number "1" should be documented in Column 29 for all aircraft/ store connections that are normally made when the store is connected to the aircraft, and power is applied to the stores management system.

Subsequent numbers (numerical order) should then be documented in columns 28-29 to indicate the order in which a circuit, or group of circuits, are made active at the aircraft/store interface connection as a result of aircraft stores management or store switching logic. All events that take place concurrently, should be documented with the same sequence order number.

INTERFACE SIGNAL SWITCHING SEQUENCE ORDER

NO. A601A

REMARKS

This procedure should be followed for designating the sequence of all circuits (or groups of circuits) as they are applied to the interface connector. Certain interface circuits may be optionally controlled by the pilot by direct or indirect means. If the circuit being documented has this feature, the letter "O" should be documented in Column 29.

Interface signals that are generated by the store, and are used to control an essential aircraft circuit, should use a unique sequence order number. The number used should complement the switching sequence order established for the interface.

SHEET 2 OF 2

AIRCRAFT CIRCUIT DATA CARD MATRIX-ASSOCIATED AIRCRAFT INTERFACE CIRCUITS

NO. A602

DEFINITION

Facilitates documentation which defines the on/off status of all aircraft circuits terminated at the aircraft/store interface connection.

CHARACTERISTIC	BLOCK LETTER:	F	SIGNAL CATEGORY:	All
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VA	LUE
31 - 65 (all odd numbered columns)	AN-2	Al	circuit	of associated when prime function is false)
32 - 66 (all even numbered columns)	AN-2	Al	circuit	of associated when prime function is true)
67	SEX	Al	Continu	ation

REMARKS:

Refer to characteristic A601 for applicable remarks.

Column 67. This column should be checked if the required quantity of associated interface circuits exceed the card column limits of the data card, and a second card is used.

CHARACTERISTIC	TITLE:	I/O POWER	SOURCE	NO. A603
Designates	the interface	circuit	power source location.	
CHARACTERISTIC	BLOCK LETTER:	F	SIGNAL CATEGORY: All	
COLUMN(S)	STYLE SSM-2	FORMAT	CHOICE/VALUE Aircraft Outpu	ıt
25			Aircraft Input	
REMARKS: Refer to c	haracteristic	A216 for	applicable remarks.	

CHARACTERISTIC TITLE:

CARD NUMBER

NO.

A625

DEFINITION

Provides a means to identify data cards for deck set up purposes.

SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: N/AF CARP DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Characteristic Data Block F Al SEA-1 69 Store Group Code No. 13 DI-1 70 - 72 Susp. Device Group Code No. 12 DI-1 74 - 75 Circuit Card 13 77 - 79 DI-1 Supplement Card Letter SEA-2 Al 80

REMARKS:

Refer to characteristic A325 for applicable remarks.

APPENDIX III

EQUIPMENT CHARACTERISTICS DEFINITION SHEETS

I. ATTACHMENTS

The attached sheets provide format information and data documentation rationale for the Equipment Data Documentation Formats shown in Figures 14 through 21.

HARACTERISTIC		e or susp en s NCLATURE	ION DEVICE	NO. ElOl
Designates to suspension of		rt number id	entification	of the store or
HARACTERISTIC	C BLOCK LETTER:	I	SIGNAL CATEGORY	· N/A
AP DATA:	STYLE	FORMAT	CHOICE/	VALUE
1 - 10	AN-1	1A ¹ 4, 2A ¹		or Suspension Device lature
REMARKS:				
			s or symbols m	nay be entered in

STORE OR SUSPENSION DEVICE

NO.

IDENTIFICATION

E102

DEFINITION

Designates the part number of a store or suspension device in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

N/A

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

13 - 21

DI-1

2A4, A1

Store or Suspension Device Identification

REMARKS:

Card Columns 13 and 14 are used to identify the equipment class (O1 through 13).

Card Columns 16 and 17 are used to identify the equipment type within a class.

Card Columns 19 and 20 are used to serialize the specific store within its equipment type.

A complete catalog of all the equipments contained in the AFATL Store Data File, including their assigned code numbers may be obtained by contacting ADTC/DLJA, Eglin AFB.

NO. CHARACTERISTIC TITLE: E103 SECURITY CLASSIFICATION DEFINITION Designates the security level associated with the documented store data. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: N/A CAPI DATA: CHOICE/VALUE FORMAT column(S) STYLE "U" 5A1 SSM-2 23 "C" (not used) 24 "CRD" 25 "S" 26 "SRD" 27 REMARKS: This characteristic is not used in the present AFATL Store Data File.

HARACTERISTIC	ELECTRI NUMBER	CAL CON	NECTOR	TYPE	NO. E104
Designation connector	n of the actua that is to be	l part mated to	number o the a	of the equipmen	ıt
CHARACTERISTIC	BLOCK LETTER:	I	SIGNA	L CATEGORY: N/A	
CARD DATA:					
COLUMN(S)	STYLE	FORMA	Т	CHOICE/VALUE	
31 - 48	AN-1	4A4,	A 2	Electrical (Connector Type
REMARKS:	T				
		E105 f	or annl	icable remarks.	
Herer 60		220) 1	or app-		

CHARACTERISTIC	L. L.	ECTRICAL CONN	ECTOR CODE	NO. E105
DEFINITION	HOP	DIII		
Designates	the equipmen	nt connector	type number in o	coded form.
CHARACTERISTIC	BLOCK LETTER:	I	GNAL CATEGORY:	N/A
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALU	Æ
49 -51	DI-1	13	Electrical Code Numbe	

REMARKS:

A three digit code number (001-999) is used to reference the store interface connector in a form that is suitable for data processing. Each different type connector part number is assigned a unique code number. A catalog of equipment connector part numbers vs. code number equivalents is available, and may be obtained by contacting ADTC/DLJA, Eglin AFB.

	NUMBER O	F ACTIVE	CIRCUITS	E106
Designates interface functions.	connector for	pins use normal eq	d by the equipmenuipment operation	t
CHARACTERISTIC	BLOCK LETTER:	I	SIGNAL CATEGORY:	N/A
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VAL	UE .
55 - 57	DI-1	13	Number of	Active Circuits
REMARKS:				

ARACTERISTIC	NO.			
	E107			
Designates	the number of onnector for g	spare pi: rowth/mo	ns available at the dification purposes.	equipment
CHARACTERISTIC	BLOCK LETTER:	I	SIGNAL CATEGORY:	n/A
ARD DATA:	•			
oLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
60 - 62	DI-1	13	Number of Sp	pare Pins
REMARKS:	,			
Equipment /capped an	interface conn d stowed) wire	ector pi s, are c	ns that incorporate onsidered as spare p	inactive ins.

CARD NUMBER

NO. E108

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER:

I

SIGNAL CATEGORY:

N/A

CARD DATA:

column(s)

STYLE

DI-1

FORMAT

CHOICE/VALUE

Equipment Class No.

73 - 74

71 - 72

16

Equipment Type No.

75 - 76

77

SEA-1

Al

Equipment Ident. No.

Characteristic Block Letter

78 - 80

DI-1

13

Data Card

REMARKS:

Characteristic E102, card columns 71-76 are repeated for equipment code number reference purposes only.

CIRCUIT NUMBER

E109

DEFINITION

References the equipment circuit associated with each active pin on the equipment interface connector.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY: All

'ARH HATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

1 - 3

DI-1

13

Circuit Number

REMARKS:

Only active equipment interface circuits should be assigned a circuit number. If the equipment has more than one connector, the numbering sequence should continue. The highest circuit number used must be equal to the total amount of active pins contained on all equipment connectors associated with the store.

The same circuit number must be used to identify the circuit on all data formats (signal form through signal sequence).

CHARACTERISTIC TITLE: NO. CIRCUIT FUNCTION NOMENCLATURE E109A DEFINITION Provides a brief written description of the respect equipment interface circuit function. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: A11 CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 4 - 15 AN-1 3A4 Circuit Function Nomenclature

REMARKS:

Any combination of alphanumeric characters may be documented in these card columns.

CHARACTERISTIC TITLE:
PIN REFERENCE
NO.
EllO

DEFINITION

Designates the pin number or letter associated with the equipment interface circuit.

SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: S CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Letter/Number A2 AN or 17 - 18 DI-1 Lower Case Al SEX 19

REMARKS:

Placing a check mark (x) in column 19 indicates that the pin letter specified in columns 17-18 are lower case letters.

CHARACTERISTIC TITLE: SIGNAL CATEGORY DEFINITION Designates the functional usage of the respective equipment interface circuit.

CHARACTERISTIC	C BLOCK LETTER:		SIGNAL CATEGORY: A-
	Bhock marrist.	S	SIGNAL CATEGORI: A
CARD DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
21.	SSM-1	5A1	Release
22			Monitor
23			Control
24			Sensor
25			Power

REMARKS:

Refer to aircraft characteristic A202 for applicable remarks. The same signal category assignment procedures are used for both aircraft and store interface circuits.

NO (NONE) CHARACTERISTIC TITLE: ADDED SENSOR CARD DEFINITION Provide a cue to the system computer programs that indicates a second card (unique to sensor circuit characteristics) is to be examined. SIGNAL CATEGORY: Sensor Only CHARACTERISTIC BLOCK LETTER: S CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE 26 SEX Al Added Sensor Card REMARKS: This cue is not functional, and is provided for system growth purposes only.

CHARACTERISTIC		E TYPE	NO. Ell2
DEFINITION			
			ble that is used by the rface circuit.
CHARACTERISTIC	BLOCK LETTER:	s	SIGNAL CATEGORY: ALL
CARD DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
27	SSM-1	3A1	Standard
28			Shielded
29			Coaxial (other)
REMARKS:			
Equipment are descr	wire type and ibed in the Al	i part numb FATL-TR-73-	per data documentation procedures -214, Phase I report on page 122.
		11 10 110	

EFINITION				
required by	he nominal vo the respecti e operation.	oltage value (either DC or AC) th interface circuit 1	nat is For
CHARACTERISTIC	BLOCK LETTER:	s sign	NAL CATEGORY: All Exc	ept Sensor
CARD DATA:				N. T. Park
Column(s)	STYLE	FORMAT	CHOICE/VALUE	
31 - 35	DR-2	F5.0	Nominal Volta Value (Volts)	ge
REMARKS:				

SHEET I OF 1

CHARACTERISTIC TITLE: NO. E114 VOLTAGE TYPE DEFINITION Define the type of voltage required by the respective equipment interface circuit. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT AC (400 Hz) 36 SSM-2 3A1 37 DC 38 Other

REMARKS:

Column 38. Is checked if the equipment interface circuit must be powered by a special type power supply.

STEADY CURRENT (AMPS)

NO.

E115

DEFINITION

Designates the maximum steady state current that can be drawn by the respective equipment interface circuit load.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

column(s)

STYLE

FORMAT

CHOICE/VALUE

40 - 44

DR-2

F5.0

Steady Current (AMPS)

REMARKS:

This characteristic value is based on the circuit being powered from a maximum source voltage.

All parallel equipment loads that are directly connected to the interface connection should be summated.

CHARACTERISTIC T		TYPE		NO. E116
DEFINITION				
Indicates the equipment into	type of load erface circui	impedance t.	e associated with the	
CHARACTERISTIC I	BLOCK LETTER:	S S	SIGNAL CATEGORY: All	
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
46	MSM-2	4A1	Inductive	
47			Resistive	
48			Lamp	
49			Motor	
REMARKS:				
RESPARATO.				
Section 1 Section 3				
				SHEET 1 OF 1

NO. CHARACTERISTIC TITLE: E117 GROUND CIRCUIT DEFINITION Indicates that the equipment interface circuit is directly grounded in the store or suspension device. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Ground Circuit Al SEX 51 REMARKS: Should be checked if the equipment circuit ground is used Column 51. for store identification, presense, or any other similar function. This column should also be checked if the equipment circuit is a power return (structure ground) connection.

START/INRUSH CURRENT

NO. E118

DEFINITION

Designates the maximum transient current that can be drawn by the respective equipment interface circuit load.

CHARACTERISTIC BLOCK LETTER:

S

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

52 - 56

DR-2

F5.0

Current (Amps)

57 - 61

DR-2

F5.0

Time (Sec.)

REMARKS:

This characteristic value is based on the circuit being powered from a maximum source voltage.

All parallel equipment loads that are directly connected to the interface connection should be summated.

CHARACTERISTIC TITLE:

LOAD LOCATION

NO.
E120

DEFINITION

Designates the location of maximum circuit resistance relative to the aircraft/store interface connection.

CHARACTERISTIC BLOCK LETTER: S SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

63 MSM-1 2Al Aircraft

64 Equipment

REMARKS:

Both columns should be checked if the circuit has a component impedance or current limiting load on both sides of the interface connection.

Column 63 and 64 should be left blank if the interface connection is a store aircraft structure ground.

CHARACTERISTIC		JRRENT LIMITED		NO. E121
EFINITION				
Indicates t	that the equiperice.	oment circuit	contains a series	current
CHARACTERISTIC	C BLOCK LETTER:	s sig	NAL CATEGORY: ALL	
ARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALUE	
66	SEX	Al	Current Limit	ed .
REMARKS:				
				SHEET 1

CARD DATA:	or suspensio	s FORMAT	SIGNAL CAT	PCOPY.	onitor Only
type of store CHARACTERISTIC B CARD DATA: COLUMN(S)	or suspension Lock LETTER:	s FORMAT	SIGNAL CAT	EGORY: M	onitor Only
	STYLE	FORMAT		M(
COLUMN(S)			CF	HOICE/VALUI	E
			Ch	HOICE/VALUI	E
68	SEX	0.7			
		Al	E	lectrical	Identification
REMARKS:					
REMARKS:					
All The Land					

CHARACTERISTIC	TITLE:	SUMMATE	NO. E123
Provides a steady stat	cue to the set ransient	system comp current.	uter programs for calculating
CHARACTERISTIC	BLOCK LETTER	: s	SIGNAL CATEGORY: All Except Sensor
CARD DATA:			ALL MACORE DESISOT
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
70	SEX	Al	Summate
REMARKS:			
Refer to AF description	FATL-TR-73-2: n of this cha	14, Phase l aracteristi	, page 18, for a detailed c.

HARACTERISTIC TITLE: PIN CODE LETTER						E124
EFINITION						
Defines the	interface con	nector pi	in size	in coded	form.	
			GTONAT	CATEGORY:	All	
	BLOCK LETTER:	S	SIGNAL	CAIEGORI.	HII	
ARD DATA:						
COLUMN(S)	STYLE	FORMAT		CHOICE/VA	LUE	
20	SEA-1	Al		Pin Code	e Letter	
lan V						
REMARKS:						
IMPERIO.						
	Cod a 113 a				ama das	owi had
Equipment	pin size data TL-TR-73-214,	Dhaga T	ation p	orocedures on page 1	are des	SCIIDea
in the AFA	TL-TR-73-214,	Phase 1	report	On page 1		

DEFINITION		CODE LETTER	E	125
Designates tused by the	he part numb equipment fo	per (in coded for the respecti	orm) of the wire or cabl ve interface circuit.	e
CHARACTERISTIC	BLOCK LETTER:	s SIGN	AL CATEGORY: ALL	
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
30	SEX	Al	Wire Code Letter	
REMARKS:				
REMARKS:				
REMARKS:	aracteristic	Ell2 for appl:	icable remarks.	
	ıracteristic	Ell2 for appl	icable remarks.	
	aracteristic	Ell2 for appl	icable remarks.	
	aracteristic	Ell2 for appl:	icable remarks.	
	aracteristic	Ell2 for appl:	icable remarks.	
	aracteristic	Ell2 for appl:	icable remarks.	
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	aracteristic	Ell2 for appl:	icable remarks.	
	aracteristic	Ell2 for appl:	icable remarks.	
	aracteristic	Ell2 for appl:	icable remarks.	

CONNECTOR INSERT COMPATIBILITY CODE NUMBER

NO. E130

DEFINITION

Alphanumeric code number used to describe the equipment interface connector in terms that will facilitate computerized aircraft/store connector mating compatibility testing.

CHARACTERISTIC BLOCK LETTER: I SIGNAL CATEGORY: N/A

CARD DATA:

column(s)	STYLE AN-1	FORMAT Al	CHOICE/VALUE Connector Type Code Letter
2 - 3	DI-1	12	Insert Configuration Code No.
Į,	DI-1	Il	Keyway Position Code No.

REMARKS:

Refer to aircraft characteristic AlO4 for applicable remarks. The same procedure is to be used for coding both aircraft and store connector inserts.

CHEET 1 OF 1

CHARACTERISTIC		ER OF CONNEC			NO. E131
EFINITION					
connector to	the number of o provide a ph nterface circu	ysical barr			face
CHARACTERISTIC	BLOCK LETTER:	I SI	GNAL CATEGORY:	N/A	
CARD DATA:					
column(s)	STYLE	FORMAT	CHOICE/	VALUE	
5 - 7	DI-2	13	Number of Isolation		
REMARKS:					

CHARACTERISTIC TITLE: STORE OR SUSPENSION DEVICE CODE NUMBER

DEFINITION

NO.
E132

Provides a data file reference for store or suspension device code number that is applicable to the equipment interface connector.

CHARACTERISTIC BLOCK LETTER: I SIGNAL CATEGORY: N/A

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

69 - 70 DI-1 I6 Equipment Class No.

71 - 72 Equipment Type No.

73 - 74 Equipment Ident. No.

REMARKS:

Refer to characteristic ElO2 for applicable remarks.

CHARACTERISTIC TITLE: SIGNAL SEQUENCE GROUP CODE NUMBER E133

DEFINITION

Designates the interface signal sequence configuration of all circuits associated with the equipment interface connector in coded form.

CHARACTERISTIC BLOCK LETTER: I SIGNAL CATEGORY: 1/4

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

63 - 66 DI-2 I4 Signal Sequence Group

Code Number

REMARKS:

This characteristic is non-functional and was provided on the data documentation format for file growth purposes only.

CHARACTERISTIC TITLE:

CARD NUMBER

NO.

E135

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER: I SIGNAL CATEGORY: N/A

CARL DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
76	SEA-1	Al	Characteristic Block Letter I
77 - 79	DI-1	13	Data Card
80	SEA-2	Al	Supplement Card Letter

REMARKS:

Column 80 is provided to indicate that the data card supplements the basic data contained on the original corresponding characteristic data block card. The letter "A" is entered (indicates first supplement card) and the same data card number is used.

References on the equi	the equipment pment interfac	circuit ce connec	associated with tor.	each act	cive pin
CHARACTERISTIC	BLOCK LETTER:	s	SIGNAL CATEGORY:	All	
ARD DATA:					
column(s)	STYLE	FORMAT	CHOICE/V	ALUE	
1 - 3	DI-1	13	Store	Circuit	Number
DEMA DVO					
REMARKS:		E100 A-	annlicable rema	rks.	
	aracteristic 1	E109 for	appricable rema		
	aracteristic	E109 10r	appricate rema		

CHARACTERISTIC TITLE: STORE LOOP CIRCUIT
IDENTIFICATION F151

DEFINITION

Indicates that the equipment circuit is a part of a series loop circuit that is directly returned to the aircraft.

CHARACTERISTIC BLOCK LETTER: S SIGNAL CATEGORY: * All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

4 SEA-2 Al Store Loop Circuit

5 SEX Al Loop Common

REMARKS:

Column 4. Must be identified with a code letter (A to Z) if the equipment circuit is one end of a series circuit store loop connection that is electrically isolated from ground and all other store circuitry. The store loop may be a direct hardware pin to pin loop, a pin to pin loop containing a series resistance, or a pin to pin loop that is broken by a set of switch or relay contacts. The opposite end of the loop circuit must also be identified with the same code letter for I/O correlation purposes.

STORE LOOP CIRCUIT IDENTIFICATION

NO.

E151

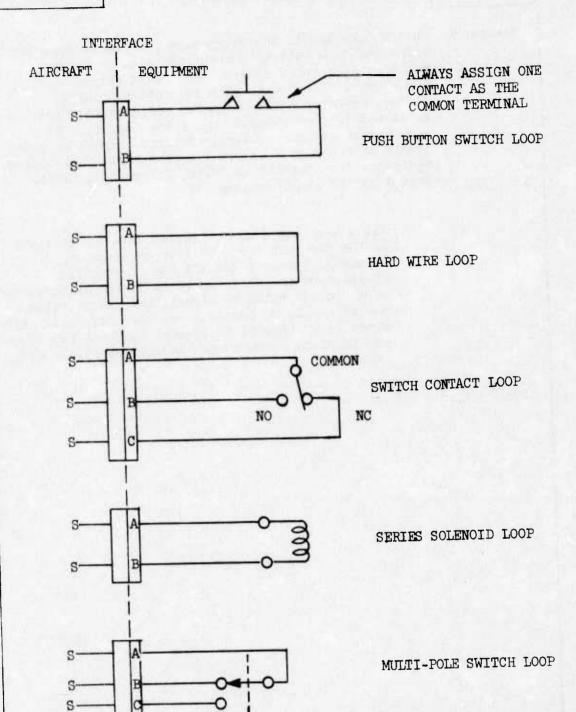
REMARKS

- Column 5. Must be checked if the store loop circuit is directly connected to a switch "common" contact, or a common pole of a relay contact that is in series with the store loop circuit. The respective normally closed, or other poles of switch contacts that are connected to the opposite end of the loop circuit should leave column 5 blank. All loop common circuits should be coded as a source return circuit when coding equipment characteristics (E152, column 14), (E501, column 6) and (E605, column 20).
 - * All store loop common circuits that can be used by the aircraft for a variety of functions (meaning, the loop circuit has no specific application for store operation), should be coded as a "power" category signal, and the opposite end(s) should be coded as "monitor" signals. All store loop circuits designated as "monitor" circuits should place a check mark in characteristic E255, column 33.

SHEET 2 OF 3

REMARKS:

SAMPLE LOOP CIRCUITS



THIS IS NOT A STORE LOOP SINCE THE STORE CONNECTIONS ARE NOT BI-DIRECTIONAL WITH RESPECT TO CURRENT FLOW

SHFET 3 OF 3

DIODE

CHARACTERISTIC TITLE: RESPECTIVE LOOP LOAD CONNECTION CONNECTOR CODE NUMBER

NO. E151A

DEFINITION

Reference the equipment connector (by code number) used by the opposite end of the store loop connection.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

A11

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

6 - 8

DI-2

13

Connector Code Number

REMARKS:

Enter the code number of the equipment connector used by the opposite end of the store loop connection for two ended loop circuits only.

Leave these columns blank if the loop circuit connection being documented is one end of a store loop that is connected to a multipole switch.

CHARACTERISTIC TITLE: RESPECTIVE LOOP LOAD CONNECTION PIN REFERENCE E151B

DEFINITION

References the equipment connector pin letter or number used by the opposite end of the store loop connection.

CHARACTERISTIC BLOCK LETTER: SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

9 - 10 AN or A2, Letter/Number

DI-2

11 SEX Al Lower Case

REMARKS:

Refer to characteristic El51A for applicable remarks.

AIRCRAFT CIRCUIT CONFIGURATION REQUIREMENTS - ON STATE

NO. E152

DEFINITION

Specifies the configuration of the type of aircraft control circuit that must be used to obtain correct equipment operation.

CHARACTERISTIC BLOCK LETTER: S			SIGNAL CATEGORY: All Except Sensor		
CARD DATA:			ATT EXCEPT BEISOF		
column(s)	STYLE	FORMAT	CHOICE/VALUE		
13	SSM-1	2A	1 Source - Power		
14			Source - Return		
15	MSM-2	5A	Circuit Type - Circuit Load		
16			Circuit Type - Circuit Switch		
17			Circuit Type - Current Limiter		
18			Circuit Type - No Current Limit		
19			Circuit Type - No Circuit Load		

REMARKS:

This characteristic is used in conjunction with characteristic A301 for determining interface circuit compatibility.

- Column 13. This column should be checked if the store circuit requires a power source from the aircraft.
- Column 14. This column should be checked if the store circuit must be connected to ground (power return) in the aircraft.
- Column 15. This column should be checked if the store circuit is at ground potential and requires a load in the aircraft.

NO.

E152

REMARKS

- Column 16. This column should be checked if the store circuit requires a switching means in the aircraft to interrupt/control current flow in the circuit.
- Column 17. This column should be checked if the store circuit requires a current limiting resistance in the aircraft for normal equipment operation.
- Column 18. This column should be checked if the store contains a series current limiting resistance, and no similar device should be present on the aircraft side of the interface connection.
- Column 19. This column should be checked if the store circuit contains a circuit load, and no load other than a current limiting resistor should be present at the aircraft side of the interface connection.

CHARACTERISTIC TITLE: AIRCRAFT CIRCUIT CONFIGURATION REQUIREMENTS - OFF STATE

NO. E153

DEFINITION

Specifies the configuration of the type of aircraft circuit that must be used when the interface circuit is in an off state.

CHARACTERISTIC	C BLOCK LETTER:	g S	IGNAL CATEGORY: All Ferral C
CARD DATA:		<u> </u>	All Except Sensor
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
20	SSM-1	4A1	Parallel Load To Ground
21			Grounded
22			Open Circuit
23			Optional

REMARKS:

This characteristic is used in conjunction with characteristic A302 for determining interface circuit compatibility.

- Column 20. This column should be checked if the store circuit requires a high impedence path to ground for circuit load balancing purposes.
- Column 21. This column should be checked if the store circuit must be grounded for safety reasons, or be grounded to meet an off state circuit operation requirement.

AIRCRAFT CIRCUIT CONFIGURATION REQUIREMENTS - OFF STATE

NO. E153

REMARKS

- Column 22. This column should be checked if the store circuit must be electrically isolated from the aircraft when the interface signal is not present.
- Column 23. This column may be checked if the store circuit design is such that any off state aircraft configuration is acceptable to the store.

SHEET 2 OF 2

MINIMUM INTERFACE VOLTAGE

NO. E154

DEFINITION

Specifies the minimum voltage value that must be applied to the equipment interface for normal store circuit operations.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

27 - 30

DR-2

F4.0

Minimum Interface Voltage

REMARKS:

This characteristic is only applicable to equipment input circuits.

CHARACTERISTIC TITLE: NO. MAXIMUM INTERFACE VOLTAGE E155 DEFINITION Specifies the maximum voltage value that can be applied to the equipment interface for normal store circuit operation. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 32 - 35 DR-2 F4.0 Maximum Interface Voltage REMARKS: This characteristic is only applicable to equipment input circuits.

CHARACTERISTIC TITLE: NO. MULTI-CONDUCTOR CABLE CIRCUIT E156 DEFINITION Designates that the equipment circuit is one conductor of a multiconductor cable that is used within the store and is connected to the interface. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: S All CARD DATA: COLUMN(S) CHOICE/VATUE STYLE FORMAT 37 SEA-1 Al Multi-Conductor Cable REMARKS: Refer to characteristic A205 for applicable remarks.

	FLOATI					E157
EFINITION			•		1 1836	
Designate to termi	es that the eq nate a cable s	quipment i	nterface co	nnecti	on is u	ısed
		T	SIGNAL CATEO	ZORY.	D	0-1
	BLOCK LETTER:	S	SIGNAL CATE	JONI.	Power	Only
CARD DATA:	Factor and					
COLUMN(S)	STYLE	FORMAT	СНС	OICE/VA	LUE	
39	SEX	Al	Flo	ating	Shield	Circuit
REMARKS:						
REMARKS:						
	o characterist	tic A213 f	or applicab	le rem	narks.	
	o characterist	cic A213 f	or applicab	le rem	narks.	
	o characterist	cic A213 f	or applicab	le rem	narks.	
	o characterist	tic A213 f	or applicab	le rem	arks.	
	o characterist	cic A213 f	or applicab	le rem	arks.	
	o characterist	cic A213 f	or applicab	le rem	arks.	
	o characterist	cic A213 f	or applicab	le rem	narks.	
	o characterist	cic A213 f	or applicab	le rem	arks.	

CHARACTERISTIC TITLE: NO. STORE STRUCTURE GROUND E158 DEFINITION Designates that the equipment side of the interface is directly connected to store structure ground, and the circuit is used for aircraft/store grounding (power return) purpose only. SIGNAL CATEGORY: Power Only CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT 41 SEX Al Store Structure Ground REMARKS: Refer to characteristic A214 for applicable remarks.

CHARACTERISTIC TITLE: E159 OPTIONAL INTERFACE CIRCUIT DEFINITION Designates that the equipment interface circuit is not essential for store operation. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Optional Interface Circuit 68 Al SEX

REMARKS:

This characteristic is primarily concerned with aircraft/store interface circuit compatibility testing. In certain cases, a store has several unused switch contacts terminated at its interface connector. These circuits, and other circuits (such as advisory type store status signals) that do not affect aircraft/store electrical compatibility with respect to meeting minimum operational requirements, should have a check mark in column 68.

When column 68 is checked, the system computer programs will still consider the circuit in the processing of interface data. However, all output data that include such circuits will be identified with the letter "0" after its store circuit function nomenclature. Refer to Figure 27 of the Phase II report for a typical example.

CH RACTERISTIC TITLE: STORE OR SUSPENSION DEVICE

NOMENCLATURE CARD NO.

NO. E160

DEFINITION

Designates the part number of a store or suspension device in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S) STYLE FORMAT

CHOICE/VALUE

69 - 70

DI-1

Class 12

71 - 72

12

Type

73 - 74

12

Ident

REMARKS:

Refer to characteristic E102 for applicable remarks.

CHARACTERISTIC TITLE: MAXIMUM LOOP CIRCUIT STEADY CURRENT (AMPS)

NO. E161

DEFINITION

Designates the maximum steady state current that can be carried or switched by a store loop circuit.

CHARACTERISTIC BLOCK LETTER: S SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

43 - 46 DR-2 F4.0 Maximum Loop Circuit Steady Current

REMARKS:

This characteristic is used in conjunction with aircraft characteristic A307 to test aircraft/store circuit compatibility for store loop circuits only.

This characteristic is not applicable to store loop circuits that contain a series load. The characteristic is solely used to test the current carrying limits of the store loop.

STORE LOOP CIRCUIT TYPE CODE

NO. E161A

DEFINITION

Defines the type of store loop circuit by coded means.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

47

SEA-2

Al

Store Loop Circuit Type Code

REMARKS:

The following coding system may be used to correlate store loop circuit types with code numbers. This system may be expanded to facilitate new loop types.

CODE LETTER	LOOP TYPE
A	Hardwire Jumper
В	Series Momentary Switch, N.O.
C	Series Load, No Switch
D	Series Load, Plus N.C. Switch
E	Common Terminal, Multi-Pole Switch
F	N.C. Terminal, Multi-Pole Switch
G	N.O. Terminal, Multi-Pole Switch

CHARACTERISTIC TITLE: SENSOR CIRCUIT SIGNAL FORM/LOGIC CHARACTERISTIC CODE NO.

NO. E162

DEFINITION

Designates a code number that is used to identify the signal form and logic characteristics of sensor type equipment interface circuits.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

Sensor Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

48 - 51 DI-2

I4

Sensor Circuit Code No.

REMARKS:

Refer to characteristic A312 for applicable remarks.

MANDATORY CABLE TYPE

NO. E163

DEFINITION

This characteristic is used in conjunction with characteristic Ell2 to specify the type of aircraft wire or cable that must be used to facilitate proper signal transmission to or from the store.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

53

SEX

Al

Mandatory Cable Type

REMARKS:

This column is to be left blank if the type of wire or cable used in the aircraft is optional, and will not affect normal store circuit operation.

MULTI-WIRE CONNECTION

NO. E164

DEFINITION

Designates that the equipment interface circuit is one of several parallel jumper wires that are connected to individual store connector pins and have no other electrical function in the store.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

12

SEA-2

Al

Multi-Wire Connection

REMARKS:

This characteristic, and characteristic A315 are provided to facilitate the documentation of aircraft/store interface circuits that form part of logical loop circuit sequence that is peculiar to a specific store. Multi-wire connectors differ from loop circuits because each pin is used for a special purpose and cannot be used by more than one store.

NO. E165

DEFINITION

Specifies the wire size used in the equipment for the interface connection, and indicates the range of acceptable aircraft wire sizes that are compatible with the store circuit.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY:

All

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
55 - 56	DI-1	I2	Actual Wire Size
57 - 58	DI-1	12	Acceptable Aircraft Minimum Mating Sizes
59 - 60	DI-1	12	Acceptable Aircraft Maximum Mating Sizes

REMARKS:

- Columns 55-56. Should be used to document the actual wire size used in the equipment. The size specified should be based on the size wire connected to the equipment interface connector.
- Columns 57-58. Should be used to document the minimum size air-craft wire that can be used, based on the current carrying requirements of the equipment circuit.
- Columns 59-60. Should be used to document the maximum size air-craft wire that can be used, based on the pin size limitations of the equipment circuit interface pin connection.

CHARACTERISTIC TITLE:

NO CIRCUIT

DEFINITION

Designates that the equipment interface connection is not an active circuit.

CARD DATA:

COLUMN(S) STYLE

CHARACTERISTIC BLOCK LETTER:

FORMAT

CHOICE/VALUE

N/A

SIGNAL CATEGORY:

66

SEX

Al

No Circuit

REMARKS:

The wording "NO CKT" should be documented in characteristic E109A if no circuit is connected to the respective connector pin. This will identify a no circuit on data printouts.

CHARACTERISTIC TITLE: NO. CONNECTOR IDENTIFICATION CODE NO. E167 DEFINITION Designates the code number of the connector associated with the equipment interface circuit. CHARACTERISTIC BLOCK LETTER:S SIGNAL CATEGORY: A11 CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 63 - 65 DI-1 I3 Connector Ident. Code No.

REMARKS:

Refer to characteristic E105 for applicable remarks.

CARD NUMBER

NO.

E175

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER: S

SIGNAL CATEGORY:

All

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
76	SEA-1	Al	Characteristic Block Letter S
77 - 79	DI-1	13	Data Card
80	SEA-2	Al	Supplement Card Letter

REMARKS:

Refer to characteristic El35 for applicable remarks.

STORE OR SUSPENSION DEVICE IDENTIFICATION CODE NO.

NO. E202

DEFINITION

Designates the part number of a store or suspension device in coded form.

CHARACTERISTIC BLOCK LETTER: I,

SIGNAL CATEGORY:

All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

71 - 72

DI-1

16

Class

73 - 74

Туре

75 - 76

Ident

REMARKS:

Refer to characteristic E102 for applicable remarks.

CHARACTERISTIC '	TITLE:	ARD NUMBER			NO. E204
Provides a purposes.	means to id	entify data	a cards for de	ck set up	
CHARACTERISTIC	BLOCK LETTER	: L	SIGNAL CATEGOR	RY: All	
CARD DATA:					
column(s)	STYLE SEA-1	FORMAT Al		E/VALUE	lock Letter L
78 - 80	DI-1	13	Data (Card	
REMARKS:					
					SHEET 1 OF

COLUMN(S) STYLE FORMAT CHOICE/VALUE 1 - 3 DI-1 I3 Circuit Number	
1 - 3 DI-1 I3 CIFCUIT NUMBER	
REMARKS:	
Refer to characteristic E109 for applicable remarks.	

Designates the functional usage of the respective equipment interface circuit. CHARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: All CARD DATA:	HARACTERISTIC	TITLE:	GNAL CATEGO	RY	NO. E206
characteristic block Letter: L Signal Category: All CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 5 SSM-1 5Al Release 6 Monitor 7 Control 8 Sensor	DEFINITION				
COLUMN(S) STYLE FORMAT CHOICE/VALUE 5 SSM-1 5Al Release 6 Monitor 7 Control 8 Sensor	Designates interface	the functiona circuit.	l usage of	the respective	equipment
COLUMN(S) STYLE FORMAT CHOICE/VALUE 5 SSM-1 5Al Release 6 Monitor 7 Control 8 Sensor	CHARACTERISTIC	C BLOCK LETTER:	L SI	GNAL CATEGORY:	A11
5 SSM-1 5Al Release 6 Monitor 7 Control 8 Sensor	CARD DATA:		× -		
6 Monitor 7 Control 8 Sensor	column(s)	STYLE	FORMAT	CHOICE/VA	LUE
7 Control 8 Sensor	5	SSM-1	5Al	Release	
8 Sensor	6			Monitor	
	7			Control	
9 Power	8			Sensor	
	9			Power	
					0.000

Refer to characteristic A202 for applicable remarks and signal category documentation rationale.

REMARKS:

RELEASE SWITCH

NO. E207

DEFINITION

Specifies the aircraft switch required to initiate the store release/jettison circuit.

CHARACTERISTIC BLOCK LETTER: L

SIGNAL CATEGORY: Release Only

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
11	SSM-2	3A1	Bomb/Rocket Button
12			Trigger
13			Other

REMARKS:

This characteristic is intended to specify the required origin of the aircraft release circuit switching device based on standard weapon system design requirements.

Refer to characteristic A407 for applicable remarks.

STATION ISOLATE

E208

DEFINITION

Specifies that the equipment circuit must be controlled by a network that is electrically isolated from all other aircraft weapon station interface connectors.

CHARACTERISTIC BLOCK LETTER:

L

SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

15

SEX

Al

Station Isolate

REMARKS:

This column must be checked if the equipment circuit function is such that two or more stores (of the same type, or different types) should not be operated in parallel.

JETTISON CAPABILITY

E209

NO.

DEFINITION

Designates the modes of Jettison available in a multiple or triple ejector rack mechanism.

CHARACTERISTIC BLOCK LETTER:

L

SIGNAL CATEGORY:

Release Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

17

SSM-2

2A1

Selective

18

Panic

REMARKS:

This characteristic is only applicable to multiple ejector rack type equipments.

- Column 17. Indicates that the equipment has a separate electrical input circuit that can initiate the jettison of a store from each equipment secondary bomb rack on a selective sub-rack station basis.
- Column 18. Indicates that the equipment has a separate electrical input circuit that will initiate the simultaneous (panic) jettison of all sub-rack stations.

Column 17 and 18 should be left blank if the equipment uses its normal release circuit for jettisoning stores from equipment sub-racks.

ARD DATA:	
control of the aircraft's master armament switch. HARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Release C ARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE	
control of the aircraft's master armament switch. HARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Release C ARD DATA: OLUMN(S) STYLE FORMAT CHOICE/VALUE	
CHARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Release COLUMN(S) STYLE FORMAT CHOICE/VALUE	mly
COLUMN(S) STYLE FORMAT CHOICE/VALUE	mly
COLUMN(S) STYLE FORMAT CHOICE/VALUE	mly
COLUMN(S) STYLE FORMAT CHOICE/VALUE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
COLUMN(S) STYLE FORMAT CHOICE/VALUE	
20 DEA AI MASVEI AIMAMEITO DE	ritch
	11 0011
REMARKS:	

HARACTERISTIC 1	GROUND	SAFETY SWIT	гсн	NO. E211
EFINITION				
Specifies to control of network.	that the equip the aircraft's	oment circuis ground sa	it is required to be fety (ordnance firing	under)
HARACTERISTIC	BLOCK LETTER:	L SI	GNAL CATEGORY: Release	Only
ARD DATA:				
olumn(s)	STYLE	FORMAT	CHOICE/VALUE	
22	SEX	Al	Ground Safety S	Witch
REMARKS:				

DEFINITION Designates if the equipment circuit is used to monitor the presense of a store, and also indicates whether the sensing meduim is located in the suspension device or store. SIGNAL CATEGORY: New item Only

CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY: Monitor Only
CARD DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
24	SSM-2	2Al	Suspension Device
25			Store

REMARKS:

This characteristic is only applicable to bomb racks and launcher mechanisms.

DEFINITION	RELEASE	E SEQUENCE	LOGIC	E213
DEFINITION				
aircraft n	etwork that w	vill facil:	it is normally controll itate the multi-station other similar off-load	release
CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY: Release	Only
CARD DATA:				
COLUMN(S)	STYLE	FORMAT		
27	SEX	Al	Release Sequen	ce Logic
REMARKS:				

ARACTERISTIC T		MODE LOGIC		NO. E214
FINITION				
aircraft r	that the releanetwork that rendered correlation word functions.	quires aircr	art accach acc	Touce parameter
HARACTERISTIC	BLOCK LETTER:	L SIGN	AL CATEGORY:	Release Only
ARD DATA:				
olamn(s)	STYLE	FORMAT	CHOICE/VALU	Æ
29	SEX	Al	Delivery N	Mode Logic
REMARKS:				

SYSTEM POWER STATUS

E215

DEFINITION

Specifies in general terms, the on/off status of each equipment interface circuit with respect to a typical stores management system power control network.

CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY: All
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
31.	MSM-2	A41	Off
32			Standby
33			Operate
34			Other

REMARKS:

- Column 31. Indicates that the equipment interface circuit is normally active when the aircraft SMS is in an off mode.
- Column 32. Indicates that the equipment interface circuit is normally active when the aircraft SMS is in a data entry/system setup mode, or is in a present/unarmed mode.
- Column 33. Indicates that the equipment interface circuit is only active after arming, or during a store release sequence.
- Column 34. Indicates that the circuit is applicable to nuclear weapons and is excluded from normal SMS power control.

NO. CHARACTERISTIC TITLE: E216 MONITOR POINT DEFINITION Designates the interface circuit termination point for equipment monitor signals. SIGNAL CATEGORY: Monitor Only CHARACTERISTIC BLOCK LETTER: L CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Suspension Device 2Al 36 SSM-2 Store 37

REMARKS:

- Column 36. Indicates that the equipment interface circuit is terminated at a suspension device interface connector.
- Column 37. Indicates that the equipment interface circuit is terminated at a store interface connector.

DISPLAY SYSMBOL CODE NO.

E217

NO.

DEFINITION

Designates a code number which is in turn correlated with a monitor display legend title.

CHARACTERISTIC BLOCK LETTER:

Τ.

SIGNAL CATEGORY: Monitor Only

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

45 - 46

DI-2

I2

Display Symbol Code Number

REMARKS:

Refer to sheets 2 of 3, and 3 of 3 for the display schedule used by the system.

CHARACTERIST	C TITLE: DISPLAY	SYMBOL CODE NO.	NO. E217		
REMARKS Display Schedule					
No.	Symbol	Actual Title	Symbol No		
1.	Empty	Dispenser empty	01		
2	Tubes Rem	Tubes remaining	02		
3	Tube Rel	Tube released	03		
3	Home	Intervalometer home	04		
5	Loop Open	Control loop open	05		
6	In Valve Op	Inlet valve open	06		
7	Cover Open	Nose cover open	07		
3	Dis Val Op	Discharge valve open	08		
9	Armed	Store armed	09		
10	Dissem	Disseminating fluid	10		
11	Unlocked 1	Firing switch unlocked #1			
12	Locked 1	Firing switch locked #1	12		
13	Unlocked 2	Firing switch unlocked #2			
14	Locked 2	Firing switch locked #2	14		
15	Store Gone	Store gone from station	15		
16	Store Prst	Store present at station			
17	All Gone	All stores gone	17		
18	All Prst	All stores present	18		
19 .	Rack Gone	Bomb rack gone	19		
20	Rack Prst	Bomb rack present	20		
21	All empty	All tubes/bays empty	21		
22	All full	All tubes/bays full	22		
23	Jettisoned	Equipment jettisoned	23		
24	Rockets Rdy	Rockets ready	24		
25	G Limit	G. limited	25		
26	Spare)	Ctore got #1 gone	26		
27	St Set 1 Gone	Store set #1 gone	27 28		
28	St Set 1 Prst St Set 2 Gone	Store set #1 present Store set #2 gone	29		
29	St Set 2 Cone	Store set #2 gone Store set #2 present	30		
30 31	St Set 2 Frst St Set 3 Gone	Store set #3 gone	31		
32	St Set 3 Cone	Store set #3 present	32		
33	St Set 4 Gone	Store set #4 gone	33		
34	St Set 4 Prst	Store set #4 present	34		
35	St Set 5 Gone	Store set #5 gone	35		
36	St Set 5 Prst	Store set #5 present	36		
37	St Set 6 Gone	Store set #6 gone	37		
38	St Set 6 Prst	Store set #6 present	38		
39	Overload	System overload	39		

Display Schedule (Continued)	CHARACTERIS	E217				
40 Standby Standby 40 41 Standy 1 Standy #1 41 42 Standy 2 Standy #2 42 43 Monitor Monitor 43 44 Pod Prst Pod Present 44 45 Safe Safe indicator 45 46 Threat Threat indicator 46 47 Jam Ind Jam indicator 47 48 Lnchr Prst Launcher present 48 49 Enabled Enabled 49 50 Xmit Transmit 50 51 Xmit 1 Transmit 1 51 52 Xmit 2 Transmit 2 52 53 Prearm Missile prearmed 53 54 ADM Decoy present 54 55 (Spare) 56 (Spare) 57 Miss Gone Missile gone 57 58 Miss Prst Missile present 58 59 Unlock Missile unlocked	Display Schedule (Continued)					
41 Standy 1 Standy #1 41 42 Standy 2 Standy #2 42 43 Monitor Monitor 43 44 Pod Prst Pod Present 44 45 Safe Safe indicator 45 46 Threat Threat indicator 46 47 Jam Ind Jam indicator 47 48 Lnchr Prst Launcher present 48 49 Enabled Enabled 49 50 Xmit Transmit 50 51 Xmit 1 Transmit 1 51 52 Xmit 2 Transmit 2 52 53 Prearm Missile prearmed 53 54 ADM Decoy present 54 55 (Spare) 55 56 (Spare) 55 57 Miss Gone Missile gone 57 58 Miss Prst Missile unlocked 59	No.	Symbol	Actual Title	Symbol No		
41 Standy 1 Standy #1 41 42 Standy 2 Standy #2 42 43 Monitor Monitor 43 44 Pod Prst Pod Present 44 45 Safe Safe indicator 45 46 Threat Threat indicator 46 47 Jam Ind Jam indicator 47 48 Lnchr Prst Launcher present 48 49 Enabled Enabled 49 50 Xmit Transmit 50 51 Xmit 1 Transmit 1 51 52 Xmit 2 Transmit 2 52 53 Prearm Missile prearmed 53 54 ADM Decoy present 54 55 (Spare) 55 56 (Spare) 55 57 Miss Gone Missile gone 57 58 Unlock Missile unlocked 59	40	Standby	Standby	40		
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48 Lnchr Prst Launcher present 48 49 Enabled 49 50 Xmit Transmit 50 51 Xmit 1 Transmit 1 51 52 Xmit 2 Transmit 2 52 53 Prearm Missile prearmed 53 54 ADM Decoy present 54 55 (Spare) 55 (Spare) 56 57 Miss Gone Missile gone 57 58 Miss Prst Missile present 58 59 Unlock Missile unlocked 59		Jam Ind				
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50 Xmit Transmit 50 51 Xmit 1 Transmit 1 51 52 Xmit 2 Transmit 2 52 53 Prearm Missile prearmed 53 54 ADM Decoy present 54 55 (Spare) 55 (Spare) 56 (Spare) 56 Miss Gone Missile gone 57 Miss Prst Missile present 58 Unlock Missile unlocked 59	49					
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57Miss GoneMissile gone5758Miss PrstMissile present5859UnlockMissile unlocked59	56			56		
58 Miss Prst Missile present 58 59 Unlock Missile unlocked 59			Missile gone			
59 Unlock Missile unlocked 59	58		Missile present			
	60			60		

NO. CHARACTERISTIC TITLE: E218 DISPLAY LOGIC BREAK DEFINITION Specifies if the equipment circuit should normally be controlled by a single pilot switching action, or if the circuit is part of a complex switching network. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: Control Only CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Single 2A1 SSM-2 48 Multiple 49 REMARKS: Refer to characteristic A414 for applicable remarks.

AIRCRAFT DESTINATION

E219

DEFINITION

Specifies normal destination point (in aircraft) for those equipment interface circuits classified in the sensor signal category.

CHARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Sensor Only

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
51	MSM-2	4A1	Display Indicator
52			Peculiar Processing Equipment
53			Peculiar Control Equipment
54			Power Bus

REMARKS:

- Column 51. Indicates that the equipment circuit is normally terminated at a crew station display or associated signal display processing equipment.
- Column 52. Indicates that the equipment circuit is normally terminated at a logic processing device.
- Column 53. Indicates that the equipment circuit is normally terminated at a crew station control panel that is usually dedicated to one type of store.
- Column 54. Indicates that the equipment circuit is terminated at a special power supply that is usually dedicated to one type of store.

CHARACTERISTIC TITLE:

POWER BUS

NO.

E220

DEFINITION

Designates the normal aircraft power bus that is used to power the equipment interface circuit.

SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Armament Release SSM-2 56 7A1 Armament Control 57 Battery/Jettison 58 Special Coded 59 Non-Armament 60 Special Weapon 61 Armament Power 62

REMARKS:

This characteristic is only applicable to equipment input circuits. All other type circuits should leave these columns blank.

Designates that the equipment circuit is normally controlled by the pilot. CHARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Control Only CARD DATA:		TWE.T1	GHT SETTING		E221
HARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: Control Only ARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 64 SEX Al Inflight Setting REMARKS:	FINITION				
ARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 64 SEX Al Inflight Setting REMARKS:	Designates pilot.	that the equip	oment circuit	is normally contro	olled by the
COLUMN(S) STYLE FORMAT CHOICE/VALUE 64 SEX Al Inflight Setting REMARKS:	CHARACTERISTIC	C BLOCK LETTER:	L SIG	NAL CATEGORY: Cont	rol Only
64 SEX Al Inflight Setting REMARKS:	CARD DATA:				
REMARKS:	column(s)	STYLE	FORMAT	CHOICE/VALUE	
	64	SEX	Al	Inflight Set	ting
Refer to characteristic A413 for applicable remarks.					
	REMARKS:				
		naracteristic	A413 for appl	icable remarks.	
		haracteristic	A413 for appl	icable remarks.	
		haracteristic	A413 for appl	icable remarks.	
		haracteristic	A413 for appl	icable remarks.	
		characteristic	A413 for appl	icable remarks.	
		haracteristic	A413 for appl	icable remarks.	
		haracteristic	A413 for appl	icable remarks.	

HARACTERISTIC TI	TLE:	UNIQUE		NO. E222
EFINITION				
Designates tha	t the equipme o a certain t	ent circuit i Type of store	s used for a funct	ion that
'HARACTERISTIC F	LOCK LETTER:	L SIGN	IAL CATEGORY: All	
CARI) (DATA:				
columi(s)	STYLA	FORMAT	CHOICE/VALUE	
66	SEX	Al	Unique	
				Elifell
REMARKS:				
Refer to cha	aracteristic A	A418 for appl	licable remarks.	

CHARACTERISTIC	TITLE:	SUSPENSION DEVICE TERMINATED	NO. E223
DEFINITION			
Indicates the terminate in	nose s	tore circuits that originate in the sto aircraft's bomb rack or launcher mechani	ore and

CHARACTERISTIC BLOCK LETTER: L SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

67 SEX Al Suspension Device Terminated

REMARKS:

This characteristic is only applicable to the documentation of store electrical interface connections that directly mate with a station/store suspension device and do not proceed into the aircraft.

NO. E250 CHARACTERISTIC TITLE: STORE CIRCUIT NUMBER DEFINITION References the equipment circuit associated with each active pin on the equipment interface connector. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: L CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Store Circuit Number I3 DI-1 1-3 REMARKS: Refer to characteristic El09 for applicable remarks. SHEET 1 OF 1

COMPATIBLE AIRCRAFT RELEASE FUNCTIONS - PYLON JETTISON

NO.

E251

DEFINITION

Specifies the types of aircraft pylon jettison functions that are compatible with the equipment circuit.

CHARACTERISTIC BLOCK LETTER: L

SIGNAL CATEGORY:

Release Only

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
5	SSM-2	4A1	Selective
6			Combat
7			Emergency
8			Optional

REMARKS:

This characteristic is not functional with any of the Phase 1 or 2 analytical computer programs. The AFATL Store Data File does not include any interface data for pylon interface connections.

Refer to characteristic A401 for additional remarks.

CHARACTERISTIC TITLE: COMPATIBLE AIRCRAFT RELEASE FUNCTIONS - BOMB RACK E252

DEFINITION

Specifies the type of aircraft bomb rack function that is compatible with the equipment circuit.

SIGNAL CATEGORY: Release Only CHARACTERISTIC BLOCK LETTER: CARD DATA: COLUMN(S) FORMAT CHOICE/VALUE STYLE SSM-2 5A1 Normal Eject 10 Auxiliary Eject 11 Selective Store Jettison 12 Combat Store Jettison 13 Optional

REMARKS:

Refer to characteristic A402 for applicable remarks.

COMPATIBLE AIRCRAFT RELEASE FUNCTIONS - LAUNCHER

NO.

E253

DEFINITION

Specifies the types of aircraft launcher functions that are compatible with the equipment circuit.

SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: Release Only CARD DATA: COLUMN(S) CHOICE/VALUE STYLE FORMAT 14 MSM-2 5A1 Launch Initiate 15 Store Launch Command 16 Launch Normal 17 Launch Jettison 18 Eject Jettison

REMARKS:

Refer to characteristic A403 for applicable remarks.

CHARACTERISTIC TITLE: COMPATIBLE AIRCRAFT RELEASE FUNCTION - STORE INTERFACE

NO. E254

DEFINITION

Specifies the types of aircraft store interface functions that are compatible with the equipment circuit.

CHARACTERIST I	C BLOCK LETTER:	L	SIGNAL CATEGORY: Release Only
CARD DATA:			
olumn(s)	STYLE	FORMAT	CHOICE/VALUE
22	MSM-2	7A1	Sub Rack Eject/Jett.
23			Store Dispense
24			Store Firing
25			Launch Initiate
26			Store Launch Command
27			Launch Signal
28			Store Step Only

REMARKS:

Refer to characteristic A404 for applicable remarks.

CHARACTERISTIC TIT	LE: COMPATI FUNCTIO		ITOR OPERATE	NO. E255
DEFINITION				
Specifies the	specific use	of equ	ipment monitor circuits.	
CHARACTERISTIC BLC	OCK LETTER: 1		SIGNAL CATEGORY: Monitor	c Only
CARD DATA:				
COLUMN(S)	STYLE	FORMAT		FY. VI
31	MSM-2	4A1	Store Presense	
32			Store Identific	cation
33			Circuit Switch:	ing Logic
34			Store Quantity	
REMARKS:				
D. G	-1 4 . 1	Al. oC		
Refer to	cnaracterist	tic A40c	for applicable remarks	

CHARACTERISTIC	TITLE:	ON MONITO	R POINT	NO. E256
Specifies to in a pylon, or suspensi	or adapter, t	ment monito that has no	or circuit origi o direct interfa	nates at a point ce with a store
CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY:	Monitor Only
CHARACTERISTIC CARD DATA:	BLOCK LETTER:	L	SIGNAL CATEGORY:	Monitor Only
	BLOCK LETTER:	L FORMAT	SIGNAL CATEGORY: CHOICE/VA	

REMARKS:

This characteristic is provided for data file growth purposes only and is not used by any of the Phase 1 or 2 analytical programs. At present, the AFATL Store Data File does not include interface data for pylons or adapters.

POWER SIGNAL LOGIC

NO. E257

DEFINITION

Designates the use of equipment interface circuits assigned to the power signal category.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: Power Only

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
38	SSM-2	3A1	Power Source
39			Power Return
40			Shield Circuit

REMARKS:

Refer to characteristic A415 for applicable remarks.

HARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY:	Sensor	Only
ARD DATA:					
OLUMN(S)	STYLE	FORMAT			
42 - 45	DI-2	14	Sensor	Circuit (code No.
				e (with	
REMARKS:					
Refer to	characteristic	: A312 for	r applicable rema	arks.	

CHARACTERISTIC	TITLE:			NO.
NU 以 蒙代之	OPTION	AL INTER	FACE CIRCUIT	E259
Designates for store o	that the equip	oment inte	erface circuit is	not essential
CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY:	All
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VAI	LUE
68	SEX	Al	Optional	Interface Circuit
REMARKS:				
	naracteristic	El59 for	applicable remark	S.
				SHEET 1 OF

EFINITION	PIONITION	DISPLAY CI		E260
Specifies t	hat the equipment of a store star	ent monito: tus displa;	r circuit is associa y message.	ted with the
		*		
		I a	IGNAL CATEGORY: Moni	
THARACTERISTIC	BLOCK LETTER:	L S	Moni	tor Only
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
30	SEX	Al	Operational St	atus
REMARKS:				
		,		

CHARACTERISTIC	STA!	TION SELE	CT		NO. E261
DEFINITION		Trailero.			
Indicates the	nat the equipment that incorporate	ent circu tes stati	it requires an a on selection log	ircraft ic.	interface
CHARACTERISTIC	BLOCK LETTER:	L	SIGNAL CATEGORY:	All	
CARD DATA:					
COLUMN(S)	STYLE	FORMAT	CHOICE/VA	LUE	
47	SEX	Al	Station	Select	
REMARKS:					

NO. CHARACTERISTIC TITLE: CONTROL LOGIC OPERATE E262 FUNCTION CODE NUMBER DEFINITION Designates a code number that may be used to describe the exact circuit for normal operation. SIGNAL CATEGORY: Control Only CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Control Circuit Logic 14 49 - 52 DI-2 Function Code No. REMARKS: This characteristic is non-functional and is provided on the data documentation format for system growth purposes only. SHEET 1 OF 1 CHARACTERISTIC TITLE: STORE OR SUSPENSION DEVICE CODE NUMBER NO. E265

DEFINITION

CHARACTERISTIC BLOCK LETTER: L

Designates the part number of a store or suspension device in coded form.

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

69 - 70 DI-1 I2 Class

71 - 72 I2 Type

73 - 74 I2 Ident

SIGNAL CATEGORY: All

REMARKS:

Refer to characteristic ElO2 for applicable remarks.

NO. CHARACTERISTIC TITLE: E275 CARD NUMBER DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER: T. All CARD DATA: CHOICE/VALUE STYLE FORMAT COLUMN(S) Characteristics Block Letter Al SEA-1 76 Data Card DI-1 I3 77 - 79 Supplement Card Al SEA-2 80

SIGNAL CATEGORY:

REMARKS:

Refer to characteristic E135 for applicable remarks.

CHARACTERISTIC '		CIRCUIT NU	IMBER	NO. E500
References t	the equipment on the equipmen	eircuit as nt interfa	ssociated with each	
CHARACTERISTIC	BLOCK LETTER:	T	SIGNAL CATEGORY:	All
CARD DATA:				
column(s)	STYLE	FORMAT	CHOICE/VALUE	
1 - 3	DI-1	13	Store Circuit	Number
REMARKS:				
Refer to ch	aracteristic I	E109 for a	applicable remarks.	

NO. CHARACTERISTIC TITLE: CIRCUIT SWITCHING FORM - I/O E501 POWER SOURCE DEFINITION Designates the interface circuit power source location. SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Store Input Circuit 3Al SSM-1 Store Output Circuit 6 Other

REMARKS:

Refer to characteristic A216 for applicable remarks.

Column 7. This column should be checked if the equipment circuit is used to terminate a wire shield, or is a multi-wire connection as defined in characteristic E164.

CHARACTERISTIC TITLE: CIRCUIT SWITCHING FORM - STORE INPUT CIRCUITS NO. E502

DEFINITION

Specifies the type of aircraft output circuit that is required by the equipment for normal interface circuit operation.

CHARACTERISTIC	BLOCK LETTER:	Т	SIGNAL CATEGORY: All Except Sensor
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
9	MSM-2	5A1	Maintained
10			Momentary
11			Pulsed
12			Non-Switched
13			Optional
The state of the s			

REMARKS:

- Column 9. This column should be checked if the equipment input circuit requires a continuous aircraft output signal that can be switched to an off state.
- Column 10. This column should be checked if the equipment input circuit requires a momentary aircraft output signal.
- Column 11. This column should be checked if the equipment input circuit requires a pulsating DC aircraft output signal.

CIRCUIT SWITCHING FORM-STORE INPUT CIRCUITS

NO. E502

REMARKS

- Column 12. This column should be checked if the equipment input circuit requires an aircraft output circuit that is directly connected to a power source.
- Column 13. This column should be checked if the equipment input circuit is not dependent upon the type of aircraft output circuit for normal operation. Equipment loop circuit (power input) signals are to be documented as "optional" store input circuits.

SHEET 2 OF 2

CHARACTERISTIC TITLE: CIRCUIT SWITCHING FORM -STORE OUTPUT CIRCUITS

NO. E503

DEFINITION

Specifies the type of equipment output circuit.

CHARACTERISTIC	C BLOCK LETTER:	Т	SIGNAL CATEGORY: All Except Sensor
CARD DATA:			
column(s)	STYLE	FORMAT	CHOICE/VALUE
15	SSM-2	4A1	Maintained
16			Momentary
17			Pulsed
18			Non-Switched

REMARKS:

- Column 15. This column should be checked if the equipment output circuit generates a continuous signal that can be directly or indirectly switched to an off state.
- This column should be checked if the equipment Column 16. output circuit generates a momentary signal.
- This column should be checked if the equipment Column 17. output circuit generates a pulsating DC signal.
- This column should be checked if the equipment output Column 18. circuit is directly connected to a power source that originates in the equipment, or is indirectly supplied by the aircraft via another aircraft/store interface pin connection.

CHARACTERISTIC	STOF	RE OUTPUT CIRCU CCHING COMPONE		NO. E504
DEFINITION			- In let jet	
Specifies t	he typ e of ou	tput circuit	component used in	the
equipment.				
CHARACTERISTIC	BLOCK LETTER:	T SIG	NAL CATEGORY: All E	xcept Sensor
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE	
21	SSM-2	7Al	Toggle Switc	h
22			Push Button	Switch
23			Relay	
24			Power Transi	stor
25			SCR	
26			Mech. Actuat	ed Switch
27			Other	
REMARKS:				
				зн

CIRCUIT INITIATE DELAY TIME -

NO.

E505

VARIABLE SETTING

DEFINITION

Designates that the equipment contains a means to vary the time between circuit initiate and actual application of a store output signal to the aircraft interface connection.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

28

SEX

Al

Variable Setting

REMARKS:

Characteristics E505, E506, and E507 are all related to circuit initiate delay time documentation for either store input or store output interface circuits. If the circuit being documented is a store input signal, the times documented in E506 and E507 should specify the extreme delay times that are required by the store for normal operation. If the circuit being documented is a store output signal, the times documented in E506 and E507 should specify the extreme delay times that can be generated by the store.

CHARACTERISTIC TITLE: CIRCUIT INITIATE DELAY TIME - MINIMUM TIME (SEC) NO. E506 DEFINITION Specifies the minimum circuit initiate delay time requirements of the equipment circuit. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARL DATA: CHOICE/VALUE STYLE FORMAT COLUMN(S) 29 - 32 DR-2 F4.0 Minimum (sec) REMARKS: Refer to characteristic E505 for applicable remarks. SHEET 1 OF 1 CHARACTERISTIC TITLE: NO. CIRCUIT INITIATE DELAY TIME -E507 MAXIMUM TIME (SEC) DEFINITION

Specifies the maximum circuit initiate delay time requirements of the equipment circuit.

CHARACTERISTIC BLOCK LETTER: T SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE 33 - 36 DR-2 F4.0 Maximum (sec)

REMARKS:

Refer to characteristic E505 for applicable remarks.

CIRCUIT ON/OFF TIME -VARIABLE SETTING

E508

NO.

DEFINITION

Designates that the equipment contains a means to vary the time duration (on-off) of the output signal that is applied to the aircraft interface connection.

CHARACTERISTIC BLOCK LETTER:

STO

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S)

STYLE

FORMAT

CHOICE/VALUE

38

SEX

Al

Variable Setting

REMARKS:

Characteristics E508, E509, E510, and E511 are all related to circuit on/off time documentation for either store input or store output interface circuits. If the circuit being documented is a store input signal, the times documented in E509 and E510 should specify the extreme on or off times of momentary (or pulsed) store input signals required by the equipment for normal operation. Characteristic E511 should be checked if the store input circuit requires a maintained or non-switched signal from the aircraft. If the circuit being documented is a store output signal, the times documented in E509 and E510 should specify the extreme on or off times of momentary or pulsed signals that can be generated by the equipment. Characteristic E511 should be checked if the store output circuit is a maintained or non-switched signal.

CHARACTERISTIC	CINCU.	T ON/OFF T JM TIME (SE	IME C)	NO. E509
DEFINITION				
Specifies t the equipme	he minimum cin nt circuit.	ccuit on or	off time requi	rements of
CHARACTERISTIC	BLOCK LETTER:	T S	IGNAL CATEGORY:	11 Except Sensor
CARD DATA:			A.	II Except Sensor
COLUMN(S)	STYLE	F'ORMAT	CHOICE/VAI	LUE
39 - 42	DR-2	F4.0	Minimu	m (Sec)
REMARKS:				
Refer to cha	aracteristic E	508 for ap	plicable remark	S.

CHARACTERISTIC TITLE: NO. CIRCUIT ON/OFF TIME - MAXIMUM TIME (SEC) E510 DEFINITION Specifies the maximum circuit on or off time requirements of the equipment circuit. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All Except Sensor CARD DATA: FORMAT CHOICE/VALUE COLUMN(S) STYLE 43 - 46 F4.0 Maximum (Sec) DR-2 REMARKS: Refer to characteristic E508 for applicable remarks. SHEET 1 OF 1

ment operat		т	STGNAL CATEGORY: All Except	Sensor
CARD DATA:			Ziroope	- Consor
column(s)	STYLE	FORMAT	CHOICE/VALUE	
47	SEX	Al	Indefinite	
DEMA DVQ				
REMARKS:				
REMARKS:				

CHARACTERISTIC TITLE: CIRCUIT DROPOUT DELAY TIME - VARIABLE SETTING

NO. E512

DEFINITION

Designates that the equipment contains a means to vary the time between circuit deactivate and actual removal of the output signal from the aircraft interface connection.

CHARACTERISTIC BLOCK LETTER: T SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

49 SEX Al Variable Setting

REMARKS:

Characteristics E512, E513, and E514 are all related to circuit dropout delay time documentation for either store input or store output interface circuits. If the circuit being documented is a store input signal, the times documented in E513 and E514 should specify the extreme delay times that are required by the store for normal operation. If the circuit being documented is a store output signal, the times documented in E513 and E514 should specify the extreme delay times that can be generated by the store.

THE PART OF THE PA	MINIMU	T DROPOUT M (SEC)	DELAY TIME -	NO. E513
EFINITION				
Specifies the equipment ci	e minimum cir rcuit.	euit drop	oout delay time :	requirements of the
CHARACTERISTIC 1	BLOCK LETTER:	T	SIGNAL CATEGORY:	All Except Sensor
CARD DATA:				
COLUMN(S) 50 - 53	STYLE DR-2	FORMAT F4.0		ALUE m (Sec)
REMARKS:	naracteristic	E512 for	applicable rema	rks.

CHARACTERISTIC TITLE: NO. CIRCUIT DROPOUT DELAY TIME -E514 MAXIMUM (SEC) DEFINITION Specifies the maximum circuit dropout delay time requirements of the equipment circuit. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: COLUMN(S) STYLE FORMAT CHOICE/VALUE 54 - 57 DR-2 F4.0 Maximum (Sec) REMARKS: Refer to characteristic E512 for applicable remarks.

CHARACTERISTIC TITLE: CIRCUIT (OFF) DWELL TIME - VARIABLE SETTING NO. E515

DEFINITION

Designates that the equipment contains a means to vary the off time between positive power pulses generated by pulsed type equipment output circuits.

CHARACTERISTIC BLOCK LETTER: T SIGNAL CATEGORY: All Except Sensor

CARD DATA:

COLUMN(S) STYLE FORMAT CHOICE/VALUE

59 SEX Al Variable Setting

REMARKS:

Characteristics E515, E516, and E517 are all related to circuit dwell time documentation for either store input or store output interface circuits. If the circuit being documented is a store input signal, the times documented in E516 and E517 should specify the extreme circuit (off) dwell times that are required by the store for normal operation. If the circuit being documented is a store output circuit, the times documented in E516 and E517 should specify the extreme delay times that can be generated by the store.

NO. CIRCUIT (OFF) DWELL TIME - MINIMUM (SEC) CHARACTERISTIC TITLE: E516 DEFINITION Specifies the minimum time the equipment output circuit may be adjusted (or is fixed) to control the off time between positive power pulses generated by pulsed type store output circuits. SIGNAL CATEGORY: All Except Sensor CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Minimum (Sec) F4.0 DR-2 60 - 63REMARKS: Refer to characteristic E515 for applicable remarks. SHEET 1 OF 1 CHARACTERISTIC TITLE: NO. CIRCUIT (OFF) DWELL TIME -MAD'IMUM (SEC) E517 DEFINITION Specifies the maximum time the equipment output circuit may be adjusted (or is fixed) to control the off time between positive power pulses generated by pulsed type store output circuits. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All Except Sensor CARD DATA: CHOICE/VALUE COLUMN(S) FORMAT STYLE 64 - 67 F4.0 DR-2 Maximum (Sec)

REMARKS:

Refer to characteristic E515 for applicable remarks.

	rcuit
ODDING(D)	reuit.
	reuit
REMARKS:	
Refer to characteristic E159 for applicable remarks.	
Refer to Gharacteristic hijy for appearance	

STORE OR SUSPENSION DEVICE CODE NO.

E519

DEFINITION

Designates the part number of a store or suspension device in coded form.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
69 - 70	DI-1	12	Class
71 - 72	DI-1	12	Туре
73 - 74	DI-1	12	Ident

REMARKS:

Refer to characteristic ElO2 for applicable remarks.

NORMALLY CLOSED SWITCH BREAK

NO. E520

DEFINITION

Specifies equipment circuit characteristics associated with interface circuit interrupt signals.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY: All Except Sensor

CARD DATA:

CHOICE/VALUE FORMAT STYLE COLUMN(S) Required in Aircraft MSM-2 2A1 19 Exists in Store 20

REMARKS:

- This column should be checked if the equipment circuit Column 19. requires an aircraft output signal that is normally in an on state (true) when the output circuit is inactive (not activated), and is set to an off state (false) when the aircraft output circuit is active (activated).
- This column should be checked if equipment circuit Column 20. contains a normally closed switch break which will open under normal circuit operating conditions.

This characteristic is non-functional and is provided on the data documentation format for data file growth purposes only.

CHEET 1 OF 1

CARD NUM BER

NO.

E525

DEFINITION

Provides a means to identify data cards for deck set up purposes.

CHARACTERISTIC BLOCK LETTER: T SIGNAL CATEGORY: All

CARD DATA:

COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
76	SEA-1	Al	Characteristic Block Letter T
77 - 79	DI-1	13	Data Card
80	SEA-2	Al	Supplement Card

REMARKS:

Refer to characteristic El35 for applicable remarks.

CHARACTERISTIC TITLE: E600 STORE CIRCUIT NUMBER DEFINITION References the equipment circuit associated with active pin on the equipment interface connector. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: A11 CARD DATA: CHOICE/VALUE FORMAT COLUMN(S) STYLE Store Circuit Number 13 1 - 3 DI-1 REMARKS: Refer to characteristic ElO9 for applicable remarks. SHEET 1 OF

BLOCK LETTER:	Q SIGN	WAL CATEGORY: All
STYLE	FORMAT	CHOICE/VALUE
DI-1	13	Connector Code Number
1		
∟ haracteristic	E105 for appl	icable remarks.
	STYLE DI-1	STYLE FORMAT

NO. CHARACTERISTIC TITLE: EQUIPMENT INTERFACE CONNECTION -E600B (CONNECTOR PIN IDENTIFICATION) DEFINITION Designates the pin number or letter associated with the aircraft/ equipment interface connection SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: A11 CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Letter/Number 9 - 10 AN or A2 DX-1 Lower Case Al 11 SEX REMARKS: Refer to characteristic EllO for applicable remarks.

NO.

INTERFACE CIRCUIT SIGNAL FUNCTION

E601

DEFINITION

Designates a function type for each equipment interface circuit to identify the inter-relationship of all signals terminated at the aircraft/store interface connection.

CHARACTERISTIC BLOCK LETTER:

SIGNAL CATEGORY:

A11

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
13	SSM-1	6A1	Prime Function Signal
14			Support Function Signal
15			Direct Power Return Circuit
16			Cable Shield Circuit
17			(Not used)
18			(Not used)
1			

REMARKS:

Refer to characteristic A601 for applicable remarks. The same interface circuit function type selection rationale should be used for documenting store data.

NO. CHARACTERISTIC TITLE: E601A INTERFACE SIGNAL SWITCHING SEQUENCE ORDER DEFINITION Specifies an acceptable interface signal switching order for all aircraft circuits that must be applied to, or received from the store for compatible interface circuit operation. SIGNAL CATEGORY: CHARACTERISTIC BLOCK LETTER: All CARD DATA: CHOICE/VALUE FORMAT STYLE COLUMN(S) Interface Circuit Switching AN or A2 28 - 29 Sequence Order DI-1 REMARKS: Refer to characteristic A601A for applicable remarks.

CHARACTERISTIC TITLE: STORE CIRCUIT DATA CARD MATRIX ASSOCIATED STORE INTERFACE CIRCUITS

NO. **E602**

DEFINITION

Facilitates documentation which defines the signal on/off relationship requirements for all circuits that are to be terminated at the equipment to obtain normal store operation.

CHARACTERISTIC	BLOCK LETTER:	Q	SIGNAL CATEGORY: All
CARD DATA:			
COLUMN(S)	STYLE	FORMAT	CHOICE/VALUE
31 - 65 (All odd numbered columns)	AN-2	Al	(Status of associated circuit when prime function circuit is false)
32 - 66 (All even numbered columns)	AN-2	Al	(Status of associated circuit when prime function circuit is true)
67	SEX	Al	Continuation

REMARKS:

Refer to characteristic A601 for applicable remarks.

Card columns 31-65 and 32-66 may be left blank if the prime function circuit is not affected by the active/inactive status of the respective associated store interface circuit for normal equipment operation.

CHARACTERISTIC		AL INTERFA	ACE CIRCUIT	NO. E603
Designates for normal	that the equipstore operation	oment int	erface circuit is 1	not essential
CHARACTERISTIC	BLOCK LETTER:	Q	SIGNAL CATEGORY:	All
CARD DATA:				
COLUMN(S)	STYLE	FORMAT	CHOICE/VALU	E
68	SEX	Al	Optional	Interface Circuit
REMARKS:				
	l phorocteristic	E159 for	applicable remark	s.
Nerer 60 C	liar ac oct 15 orc	1177 101	apparous rolling	

STORE OR SUSPENSION DEVICE CODE NO.

NO. E604

DEFINITION

Designates the part number of a store or suspension device in coded form.

CHARACTERISTIC BLOCK LETTER:

٥

SIGNAL CATEGORY:

All

CARD DATA:

column(s)	STYLE	FORMAT	CHOICE/VALUE
69 - 70	DI-1	12	Class
71 - 72	DI-1	12	Туре
72 - 71	DT _ 1	TO	Ident

REMARKS:

Refer to characteristic ElO2 for applicable remarks.

CHARACTERISTIC TITLE:

CARD NUMBER

DEFINITION

NO.

E625

Provides a means to identify data cards for deck set up purposes.

SIGNAL CATEGORY: All CHARACTERISTIC BLOCK LETTER: CARD DATA: CHOICE/VALUE COLUMN(S) STYLE FORMAT Characteristic Block Letter Q Al 76 SEA-1 Data Card 77 - 79 DI-1 13 Supplement Card 80 SEA-2 Al

REMARKS:

Refer to characteristic El35 for applicable remarks.

INITIAL DISTRIBUTION

Hq USAF/RDQRM	2
Hq USAF/XOXFCM	1
AFSC/SDWM	1
ASD/ENYS	1
AFWL/SUL	1
AFWL/SECA	1
AUL (AUL/LSE-70-239)	1
USNWC/Code 753	1
Nav Wpns Eval Fac/Code W	1
Sandia Lab/Tech Lib	1
Rand Corp/Lib-D	1
DDC	2
AFATL/DLOSL	2
AFATL/DL	1
AFATL/DLOU	1
AFATL/DLY	1
AFATL/DLGS	1
AFATL/DLR	1
AFATL/DLXP	1
AFATL/DLJ	1
AFATL/DLM	1
AFWL/SES	1
AFAL/AAA	1
AFATL/DLJC	1
AFATL/DLJA	15
TAWC/TRADOCLO	1
Hq USAF/SAMI	1
ASD/ENYEHM	1
Ogdne ALC/MMNOP	2
AFWL/LR	2
AFIS/INTA	1
USAF/SAMID	1
USA Aviation School/ATSAV-CTD	1
Office of Chief Nav Ops	1
ADTC/XRC	1

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This technical report describes those improvements made to the Store Interface
Data Handling Analysis - Phase I for automating Aircraft/Store Electrical Compatibility Analyses and computerized testing procedures. Until now, a manual method was used to compare hardcopy aircraft stores management system design data against store interface data generated by the Phase I Data Processing System. The improved system eliminates this time consuming task by automatically performing the complete interface compatibility analysis/test. A set of universal aircraft data documentation formats and new computer programs were developed for this added system capability. The new computer programs were designed to disclose any electrical incompatibility that may exist between the aircraft and store selected for comparison. New computer printouts provide detailed pin to pin and general interface compatibility information. Diagnostic message printouts are also provided to define each specifi incompatibility condition that was detected. The improved system may be used to evaluate or verify the adequacy of an aircraft to control its existing store complement. Essentially, the improved system would compare the electrical design limits of the aircraft stores management system against store electrical requirements that are contained in the AFATL Store Data File. Any incompatible or marginal interface condition will be detected. The system improvements described in this report will greatly reduce the time and cost associated with analyzing aircraft and stores from an electrical interface compatibility standpoint.

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Security Classification		LINKA		LINK B		LINK'C	
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Store Interface Data Handling							
Aircraft/Store Electrical Interface Compatibility							
Compatibility	7						
Computerized Testing Procedures							
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